

Serendipitous Spaces:
Discovery in the Contemporary Library

by

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ABSTRACT

Contemporary public libraries serve as a conduit between sources of knowledge and the public. They are not only a repository of knowledge but also a community hub that facilitates, creates and disseminates this information. These libraries are democratic institutions that enable and advocate for free access of information for everyone, where 'information' goes beyond physical collections to include digital formats, live events (lectures and workshops) and learning through making.

In contemporary public libraries, the interaction between people and information is vital to their success, as a library without people is essentially a storage room. This thesis proposes the design of a new public library for Sudbury that encourages discovery and elicits curiosity as a method of improving connections between people and knowledge stored in the library. Through the careful organization of the library's program, the decentralized approach to stored knowledge, and the removal of spatial barriers, the library's architecture promotes browsing, wandering and ultimately discovering all the library has to offer.

KEYWORDS: public library, discovery, exploration, serendipity, access to information, 21st century libraries, architecture, contemporary building design, browsing,

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PART 1

The Role of the Public Library

What is a public library? This section explores the history of the public library typology from its origin to its current state, and uses case studies of both national and local contemporary public libraries to help understand the role of the public library in today's society.

CHAPTER 1

The Evolution of the Library

The contemporary public library has evolved considerably since the first collections of written documents. The role of libraries today is changing with the introduction of digital technology and a growing importance for community-based services. While it is tempting to assume this kind of change is new and that previously, libraries were a static form—this is not true.¹ Current libraries we are familiar with today are quite different from the libraries in the ancient and medieval periods, and from a few hundred years ago. In looking at the historical transformation of the library typology, this thesis places focus on European and North American library histories which have had the greatest influence in developing into contemporary local policies and design. Tracing back to ancient times and the origins of the library, this chapter provides a brief overview of how the library has evolved, its changing role in society, and who had access to the institutions. While libraries have always been, in their most basic form, a collection of books; their additional roles and relationship with the public have varied considerably. The history of libraries is also the history of the book, and the library itself has existed since the origin of the written word.² The earliest writing was done on skins (vellum or parchment), bamboo, clay and papyrus.³ These documents were mostly records of taxes and transactions, but also included myths, scientific, medicinal and philosophical knowledge.⁴ The creation of these documents necessitated storage and organization; thus, the library was born.

Ancient Libraries

Historically, a library was constructed for both the protection and production of documents. Ancient libraries were presumably located in any culture that had a written language, however much of the documentation of these buildings centered around three major empires; Egypt, Greece and Rome. Libraries were usually located in cities, but small collections were also common in temples and homes.⁵ In ancient times, a library had two defining features: a collection of manuscripts, and a place for the creation of these texts.⁶ The library was not just a storehouse, but also a producer of knowledge. They were places where scholars, priests and polymaths worked, studied and wrote their own books, and where scribes would make copies of existing documents stored in their library and from any new book they acquired.⁷ Ancient libraries surrounding the Mediterranean stored written works (most commonly scrolls) in boxes on shelves, with a main catalogue or inventory that kept a record and was used to request the texts.⁸ It was during this period that the great library of Alexandria flourished as the world leader for scholarly activity, with a collection estimated at 400,000 scrolls.⁹ This was a royal library, not a public library, and its goal was to collect a copy

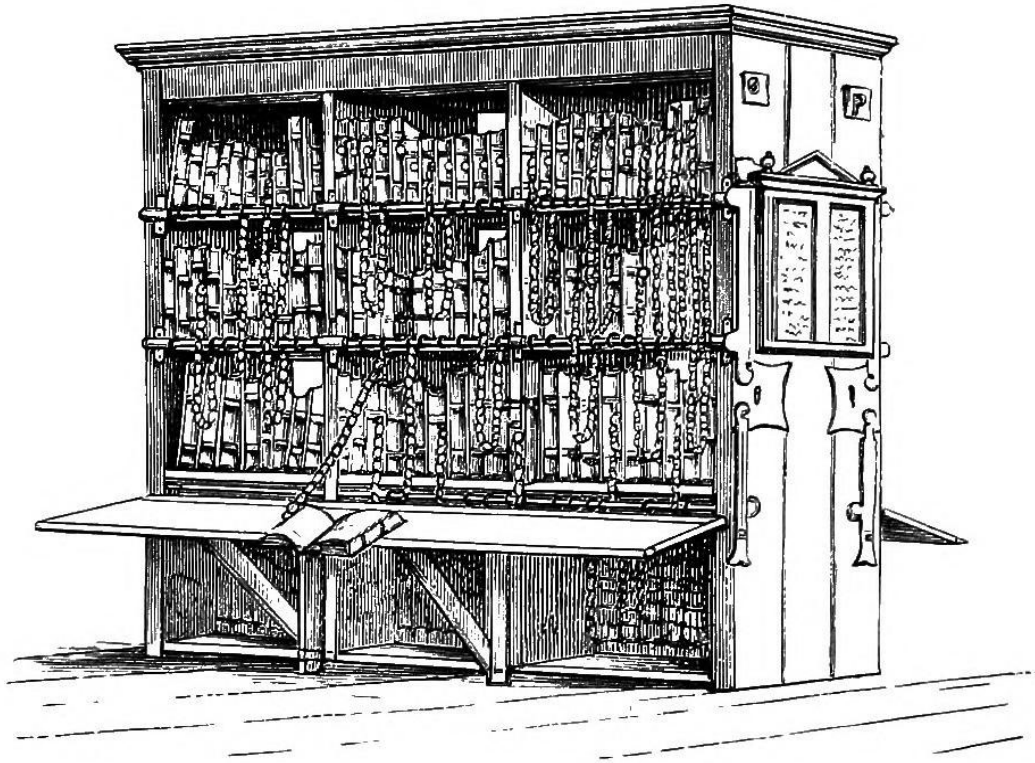


Figure 1. Chained Bookcase in Hereford Cathedral

Chaining books to the shelves was common practice in both Monastic and University libraries in the middle ages. The chains were long enough to be placed on the ledge for reading, but prevented anyone from taking the book.

of every work of literature, not to necessarily make these texts available to the public at large.¹⁰ For Alexandria, the library also served as a representation of the kingdom's wealth and a monument to the permanence of culture,¹¹ however in the city there were smaller, more accessible collections in temples and homes.¹²

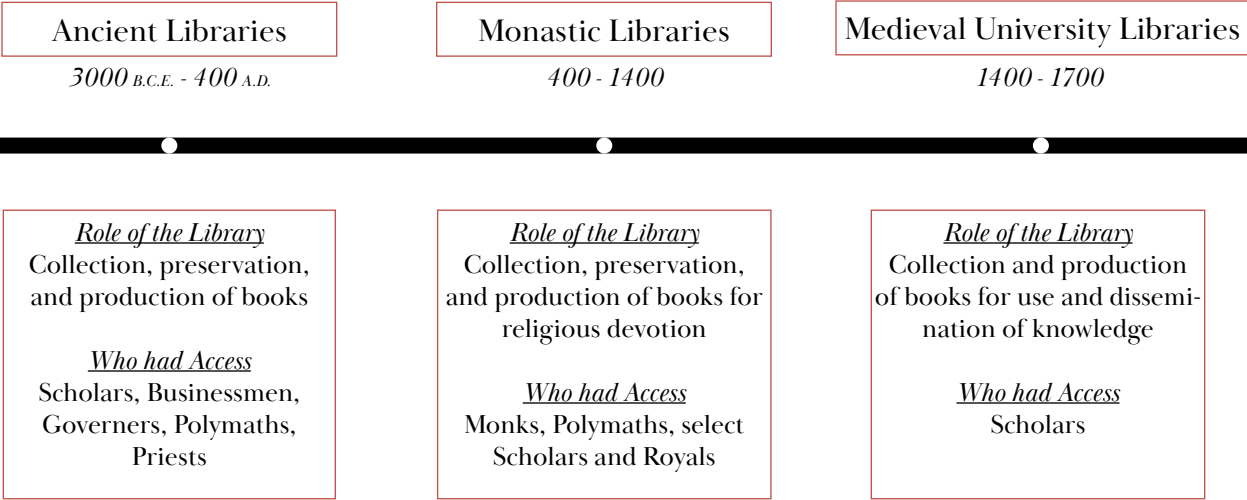
Monastic Libraries

The library as a place for safe-keeping and creation of documents continued into the Middle Ages. At this time some of the greatest libraries were in the Islamic world, in Cordoba, Baghdad and Cairo, as the birth of Islam promoted literacy and the spread of knowledge.¹³ In Europe, libraries were predominantly housed in monasteries, as the rule of St Benedict encouraged reading for idle monks as a form of prayer.¹⁴ Monks were not allowed to own personal items, increasing the need and usage of the library in monasteries. The majority of the collections at monastic libraries were theological books, however many also had copies of secular texts, language and grammar books, local literature, history and texts in foreign languages from other parts of the world.¹⁵ These books were stored in chests rather than on shelves that we see today. The chests were not all kept in one place, but spread across the monastery according to use, keeping books for worship in the church and books for reading in the refectory.¹⁶ Many monasteries also con-

tained a scriptorium—a room with good daylighting, dedicated to the copying and illustration of books.¹⁷ This work was completed almost exclusively by the monks, however outside specialists were sometimes brought in for illustrations.¹⁸ The process of making copies of a text was quite time consuming, with each monk averaging an output of two books per year.¹⁹ Monastic libraries were the primary source for book production in Europe at this time, however they were not open to the public and their collection was confined to usage by the monks, a few travelling holy men, and possibly select affluent community members.²⁰ Some monasteries were more liberal with their book lending, and would allow local residents come use the library, or bring books home to read.²¹ This usually involved leaving collateral, such as a book of an equal value or a deposit of money,²² and since the majority of the population was illiterate in the middle ages, the libraries were still a privilege for the elite few who could both read, and afford the collateral.

Medieval University Libraries

The dramatic shifts in politics and societal values at the end of the middle ages with the rise of (what would later be called) the Renaissance, signaled a transformation in the role and location of libraries. Monasteries declined and some were closed down in countries like England under the rule of King Henry VIII.²³ With the rise of the enlightenment and the pursuit for secular knowledge growing, university libraries expanded to fill the gap left by the disappearance of monastic libraries.²⁴ Monasteries were largely concerned with theological works, and the primary role of the library was for the benefit of the monks. Although university libraries were still restricted to scholars and students, their role as a place of learning created a more open approach to the access to information.²⁵ Books were initially stored in chests in a single room, similar to monasteries, but by the end of the 15th century they had begun to appear on shelves, chained to the desk so they could not be re-



moved (see figure 1).²⁶ This form of book storage was quite popular and was implemented in many large libraries in Europe such as Biblioteca Malatestiana, Laurentian Library, Trinity Hall, and Queens College.²⁷ By the 17th century books on shelves had become commonplace, and the grand display of arranging books vertically along walls led to great halls, reading rooms, and round rooms that portrayed splendor.²⁸ Universities had diverse collections and did not limit which books in particular could be read to the extent monasteries had, plus their larger student body meant that there were more people accessing the books. Unlike monastic libraries, where acquisitions were gained through copying, the university collections grew largely through donations.²⁹ In universities, the role of the library was for the maintenance and use of books, rather than just the keeping of volumes.³⁰ It was in these libraries that the emphasis on its use by people (specifically scholarly men) was deemed a necessity for cultural influence.

Private Collections and Subscription Libraries

The invention of the printing press in 1439 drastically altered the realm of books and the role of the library in Europe.³¹ Although its effects were not immediate, Gutenberg's press made books cheaper and more accessible, and by the end of the 16th century there was a significant shift in the quantities and accumulation of books.³² Although illiteracy was still high among the general population in Europe, reading aloud gained popularity, and books could be acquired by the average layman.³³ The impact of the printing press on libraries was twofold: Book-making shifted to printing houses and out of the library, and the upper and middle classes started their own private collections.³⁴ These private collections formed the basis for a new type of library; subscription libraries. Starting as what was essentially a book club, wealthier individuals would open up their private collections to members of the local community.³⁵ They would charge an annual fee for use of the books, and pa-

Subscription Libraries

1700 - 1850

Early Public Libraries

1850 - 1945

Post-War Public Libraries

1945-1990

Role of the Library

Collection of books for personal reference, education and pleasure

Who had Access

Upper and Middle Classes

Role of the Library

Collection and preservation of books for everyone to access

Who had Access

Men, women and children who resided in the area

Role of the Library

Collection and preservation of books for everyone to access, plus additional programming and outreach

Who had Access

The general public

trons would be able to take out as many books as they wished, one book at a time. As these libraries grew in popularity in cities throughout the United Kingdom, they moved out of personal residences and into their own buildings, and many formed a council of members who oversaw the library collections and decision making.³⁶ The annual costs were often quite high, making them not always accessible to the working class, however they did a great deal in disseminating knowledge to the middle class—people who were wealthy enough for a library subscription but could not afford their own personal collection.³⁷ Subscription libraries were prevalent in England and America in the 18th century, and existed in tandem with circulation libraries, which were quite similar to subscription libraries in that they had a fee, but they differed in their intent. Subscription libraries grew out of wealthy individuals' collections with the purpose of sharing knowledge, whereas circulating libraries were often based out of bookstores and were created as a business for financial gain. Circulating libraries were more popular in rural areas of the U.S. and Canada, as they had lower population bases and newer elite class that did not inherit the grand libraries that wealthy Europeans did.³⁸ In small towns the library was often attached to a general store that sold other goods, and reflected popular reading tastes, supplying novels and religious texts.³⁹ In both subscription and circulating libraries, books were borrowed from the library to take home to read, as the library itself did not offer much room for reading.

Public Libraries

By the second half of the nineteenth century, subscription libraries in England were being replaced by true public libraries—that is, libraries run by local government, free to enter, and funded by taxpayers.⁴⁰ The libraries in the United States paralleled this, spearheaded by Benjamin Franklin.⁴¹ Known as the 'social library', these institutions were established in towns across North America, as Canada followed the framework established by Franklin in the United States. In both the United States and Canada, this period saw a boom in library development. This rapid growth was caused by a combination of socioeconomic and political factors, including the establishment of the American Library Association in 1876,⁴² and the generous philanthropy of Andrew Carnegie—a steel tycoon who funded the construction of 2,500 libraries in small towns across Canada and the United States.⁴³ By the early twentieth century, women and children were recognized as legitimate clientele, hours of service had greatly increased, and the concept of open stacks was widely accepted.⁴⁴ The social role of the library was growing as was the belief that everyone should have access to information. During the Great Depression, libraries were a stabilizing force in society as a place for the unemployed and idle to spend time and to learn for free.⁴⁵ Leading up to WWII, the role of library became 'a guardian of the people's right to know' emphasizing the library's obligation to the people to provide unbiased and balanced information.⁴⁶ The public library was no longer a privilege for the elite, but an integral part of democracy. Since then, public libraries have continued to increase availability of their facilities, creating outreach programs that are inclusive of the under-privileged, as well as collections that encourage minorities.⁴⁷ The role of the public library has become not just a collection of books or an archive for safe-keeping, but a duty to make information accessible, for free, to everyone.

By the second half of the 20th century, the typical regional public library in Canada ran a variety of programs for people of all ages. As new developments were made in technology, their collections reflected this, expanding to encompass new formats including microforms, audio and video cassettes, compact discs, films, talking books, braille and kits.⁴⁸ The Canadian public library system today is a complex network comprising of main libraries in each municipality, many which have associated branches in the surrounding smaller towns. Libraries are an essential public institution, governed by municipal and provincial laws, with responsibility held by a local library board who establishes policies and budgets for library operations, controls library property, and has authority to appoint or dismiss employees.⁴⁹ These libraries are funded primarily by municipal tax revenues and other local income, receiving additional provincial grants to supplement local funding.⁵⁰ As a democratic institution in both its organizational structure and its importance in its community, public libraries in Canada continue to evolve, expanding to attain free, unbiased access to information for everyone. The role of the library in the twenty-first century has transformed dramatically compared to libraries in the past, and will be investigated in the following chapter.

Endnotes

[1] James Campbell, *The Library: A World History*, (Chicago: Thames & Hudson, 2013), 15

[2] Michael Harris, *History of Libraries of the Western World*, (Maryland: Scarecrow Press, 1999) 3.

[3] Murray, *The Library: An Illustrated History*.

Clay tablets were more durable, and have survived over time, but papyrus was cheaper and abundant in Egypt, making it the most common writing surface. Vellum or Parchment was expensive, but grew in popularity in Europe during the middle ages as Egypt controlled the papyrus trade and skins could be acquired without travel.

[4] Murray, *The Library: An Illustrated History*.

[5] Vitruvius, *The Ten Books on Architecture*, translated by Morris Hicky Morgan, (New York: Dover Publications, 1960) 186.

[6] Harris, *History of Libraries of the Western World*.

[7] Fred Lerner, *The Story of Libraries: from the invention of writing to the computer age*, (New York: The Continuum International Publishing Group, 2009). 15

[8] Campbell, *The Library: A World History*, 29

[9] Lerner, *The Story of Libraries*, 17

[10] Campbell, *The Library: A World History*, 47

[11] Lerner, *The Story of Libraries*, 12

[12] Vitruvius, *The Ten Books on Architecture*, 186.

[13] Campbell, *The Library: A World History*, 72

[14] Lerner, *The Story of Libraries*, 33

[15] Harris, *History of Libraries of the Western World*.

[16] Campbell, *The Library: A World History*, 80

[17] Murray, *The Library: An Illustrated History*.

[18] Murray, *The Library: An Illustrated History*.

- [19] Murray, *The Library: An Illustrated History*.
- [20] Murray, *The Library: An Illustrated History*.
- [21] Harris, *History of Libraries of the Western World*, 107
- [22] Harris, *History of Libraries of the Western World*, 107
- [23] Harris, *History of Libraries of the Western World*, 110
- [24] Lerner, *The Story of Libraries*, 69
- [25] Harris, *History of Libraries of the Western World*, 115
- [26] Harris, *History of Libraries of the Western World*, 109
- [27] Campbell, *The Library: A World History*, 110
Of these, Biblioteca Malatestiana in Venice, Italy was the first to build chained desks in 1564; followed by Laurentian Library, in Florence, Italy, in 1571; then Trinity Hall and Queen's College, both located in Cambridge, United Kingdom, in 1600 and 1624, respectively.
- [28] Campbell, *The Library: A World History*, 115
- [29] Harris, *History of Libraries of the Western World*, 121
- [30] Harris, *History of Libraries of the Western World*, 124
- [31] Campbell, *The Library: A World History*, 65
Printing had been invented in China 440 years before Gutenberg's press—a testament to the sophistication of technology in China. Japan and Korea compared to Europe at that time; however it wasn't until the European creation of a printing press that the process of bookmaking in Europe was altered.
- [32] Campbell, *The Library: A World History*, 91
- [33] Lerner, *The Story of Libraries*, 126
- [34] Lerner, *The Story of Libraries*, 125
- [35] Alice Crawford, *The Meaning of the Library: A Cultural History*, (Princeton: Princeton University Press, 2015). 108
- [36] Crawford, *The Meaning of the Library*, 108
- [37] Crawford, *The Meaning of the Library*, 110
- [38] Murray, *The Library: An Illustrated History*.
- [39] Harris, *History of Libraries of the Western World*, 188
- [40] Crawford, *The Meaning of the Library*, 118
- [41] Harris, *History of Libraries of the Western World*, 200
- [42] Harris, *History of Libraries of the Western World*, 270
- [43] George S. Bobinski, "Carnegie Libraries: their history and impact on american public library development," *ALA Bulletin* 62, No. 11 (December 1968), 1361-1367.
- [44] Harris, *History of Libraries of the Western World*, 271
- [45] Harris, *History of Libraries of the Western World*, 271
- [46] Harris, *History of Libraries of the Western World*, 272
- [47] Harris, *History of Libraries of the Western World*, 272
- [48] Margaret Beckman, Moshie Dahms, and Lorne Bruce, "Libraries," *The Canadian Encyclopedia*, 2006.
- [49] Beckman et al. "Libraries,"
- [50] Beckman et al. "Libraries,"

CHAPTER 2

The 21st Century Library

Approaching the 21st century, new technologies increased the number of formats that information could be stored in. Movies, television, radio, and audiobooks all became alternatives to the physical book and were added into library collections. However with the increasing popularity of the internet as an almost limitless resource of information, the purpose and role of the library has come into question. If vast amounts of information can be found using a computer, then why do we need libraries? If the role of the library was solely a physical collection of information, the internet could become a viable alternative, however, the library has many roles, and these functions are just as important as the physical collection itself. The library is still a place to access collections and resources—as it cannot be assumed that everyone has internet access and the tools to effectively operate it, but it is also a place to work, to socialize, to attend workshops, to seek help finding and accessing information, and it acts as a community hub. At the time when many critics argued the role of the public library was diminishing, studies showed that there was actually an increasing demand for the library, and an increase in the size of new libraries being built.¹ The question then arises; what is the role of a public library in the 21st century? In the discourse surrounding this debate, there is a wide variety of opinions from architects, library professionals, and local governments; however the uniting theme is the importance of access to information. The notion that all people had the right to information emerged in the early 20th century.² Before this, access to libraries was restricted by location, by a fee, or a plethora of other ways. Since the millennium, the goal of ensuring all types of information can be accessed for free, to all, has transformed and redefined the public library, developing into a truly democratic institution. The public library's transformation can be observed through three main components of public libraries; the collections, the workspaces, and the programs/services.

The Collections

The single role of the library that has remained its defining feature throughout its continuously evolving state, is the collections. Libraries have always been a place to access information, and even with the shift to digital media this remains an integral element to library design. As technology was rapidly developing at the turn of the millennium, the question of whether a physical house for books was still relevant was at the forefront of library design discourse. However as libraries are continuously increasing in popularity and have proven to remain an important piece of our communities, this question has been replaced with concerns over how this transition is made, and how the library can

best accommodate its collections. Librarian and writer Karen Latimer argues that “libraries have always been associated with knowledge, and with access to knowledge, and the fact that this access is now available online does not negate the need for guidance from skilled navigators and information specialists - indeed it often increases it.”³ While physical collections are still the most prominent collection in public libraries, in the 21st century, library collections encompass a wide range of information formats and physical objects that are housed in the building and are available for use. Public libraries can loan out everything from books, magazines, audiobooks, and e-books, to tools used for access such as kindles, laptops, and internet sticks, to even musical instruments, museum passes, camping gear, and recreational and sporting equipment. The collections—items housed in the library for use, have dramatically expanded their scope to evolve with society.

Workspaces

One of the ways digital technology has changed the library landscape is through personal laptop use. Public libraries have always been popular spots to work and study, however now the physical space most conducive to this, now only requires a desk, electrical outlet and an internet connection. While the internet may also be a place to learn, the physical space inhabited when browsing the internet is an integral piece—one still carried out by libraries. The library acts as a ‘third place’, meaning a place other than work or home, where one can spend time freely to relax, work, socialize or to be alone.⁴ It has evolved into much more than a place to get books, it is also a place to spend time. This is especially important because it is “the last redoubt of public space, at least, the only non-commercial interior public space available to all.”⁵ The need for space in the library for socialization and studying has increased dramatically, becoming an essential role of the 21st century public library.

Services

Especially in professional librarian discourse, the wide range of additional programming the library offers is increasingly important. The library has become not just a collection of books, but also hosts after-school activities for children, movie nights, seminars, workshops, etc. Some libraries have also partnered with other organizations to provide other services such as the Newcomer to Canada program run by the Toronto Public Library System, and mental health services at the London Public Library.⁶ This service-based approach redefines the library as a community hub, offering spaces that promote social interaction and different methods of learning.⁷ “Public libraries are no longer about books, they are about space. Space to read, browse, daydream, run into neighbours, go online and attend events.”⁸ These events draw people into the library, increasing the library’s use, but they are also just a different format of information. Workshops that teach new skills are an interactive form of learning that may appeal to individuals that don’t necessarily like reading, broadening the population served by the library and extending its reach.



Figure 2. Amenities of the Contemporary Public Library

This diagram provides an example of what is offered at public libraries today, categorized into three groups: collections, workspaces, and services.

In 21st century libraries these components are all apparent, although they can vary in priority. While each building and each librarian chooses what is the most important goal of the library, these three themes seem to find themselves in every one. A library is no longer just a collection of books, and it isn't even a collection of knowledge (including different forms of media)—it is more than that. A collection of knowledge only becomes a library when it is accessed by people, as a collection without visitors is ultimately a storage room. The purpose of libraries today is not just to collect information for the public to access, but to actively share it with the public; the interaction between people and information is vital. Contemporary public libraries encourage and facilitate access to knowledge, where 'knowledge' goes beyond the physical collections, as information can be discovered through the use of different technologies, through collections, through workshops and programs, and through the use of the physical space the library offers for studying, working, reading and socializing. This recognition that knowledge is broader than books, and the library's ability to adapt and foster all knowledge is what makes public libraries successful in the 21st century.

Endnotes

- [1] Campbell, James. *The Library: A World History*. Chicago: Thames and Hudson, 2013. 285.
- [2] Harris, Michael. *History of Libraries in the Western World*. Metuchen: Scarecrow Press, 1976. 271.
- [3] Latimer, Karen. "Redefining the library: current trends in library design." *Art Libraries Journal* 35, No. 1. (2010). 30.
- [4] Latimer. "Redefining the library."
- [5] Baldwin, Ian. "Big Glass: The public library's evolving typology." *Architecture Boston*. (2014): 35-37.
- [6] "Ontario Hubs: Our Changing Libraries," *The Agenda with Steve Paikin*. Aired October 20, 2017 on TVO.
- [7] Bennett, Hannah. "The Psyche of the Library: Physical Space and the Research Paradigm." *Art Documentation: Journal of the Art Libraries of North America* 32. (2013).
- [8] Baldwin. "Big Glass."

CHAPTER 3

Contemporary Case Studies of National Significance

How do contemporary public libraries implement these new roles as service providers and community hubs? The study of select national public libraries from around the world is important context for best practices and underscores the potential of a contemporary public library. While national projects are significantly larger than local libraries, they demonstrate innovative design intentions and approaches. Many design aspects are directly applicable to this research, such as the layout and organization of space with regards to different programs and their relationship with the urban fabric of the city. Each of the studied national libraries have different approaches to the organization of space and which programs are prioritized—whether it is the books themselves, spaces for working, or the cultural significance of the project. Due to the success of these national libraries, the similarities drawn between them prove to be beneficial, and can highlight potential aspects to be applied to Sudbury’s new public library.

The five public libraries of national significance to be studied are; Stockholm Public Library (Sweden), Toronto Reference Library (Canada), Seattle Central Library (United States), Bibliotheca Alexandrina (Egypt), and Calgary Central Library (Canada). Following the individual studies of each building, an analysis of the common elements and differences reveals architectural details that contribute to the success of the library.

STOCKHOLM PUBLIC LIBRARY



Figure 3: Stockholm Public Library

GUNNAR ASPLUND, SWEDEN, 1928

SIZE OF LIBRARY: 150,700 sf / 14,000 sm
NUMBER OF VOLUMES: 2 million volumes
CLASSIFICATION SYSTEM: Dewey Decimal

Although this library is now 90 years old, at the time it was built, the Stockholm Public Library was innovative and contemporary. It was the first library in Scandinavia to have open stacks and unrestricted access to books.¹ The main entrance to the library involves ascending a narrow staircase that opens directly into the main reading room—creating a sense of anticipation and emphasizing knowledge as sacred.² Over the years, the services the library offers have expanded, and the evolving function of the library has created a demand for more workspaces and rooms. These spaces seem to be confined to the wings of the building, as the main reading room hosts the front desk and library services. The constricting layout of the stacks is contrasted by the open, multi-story reading areas.

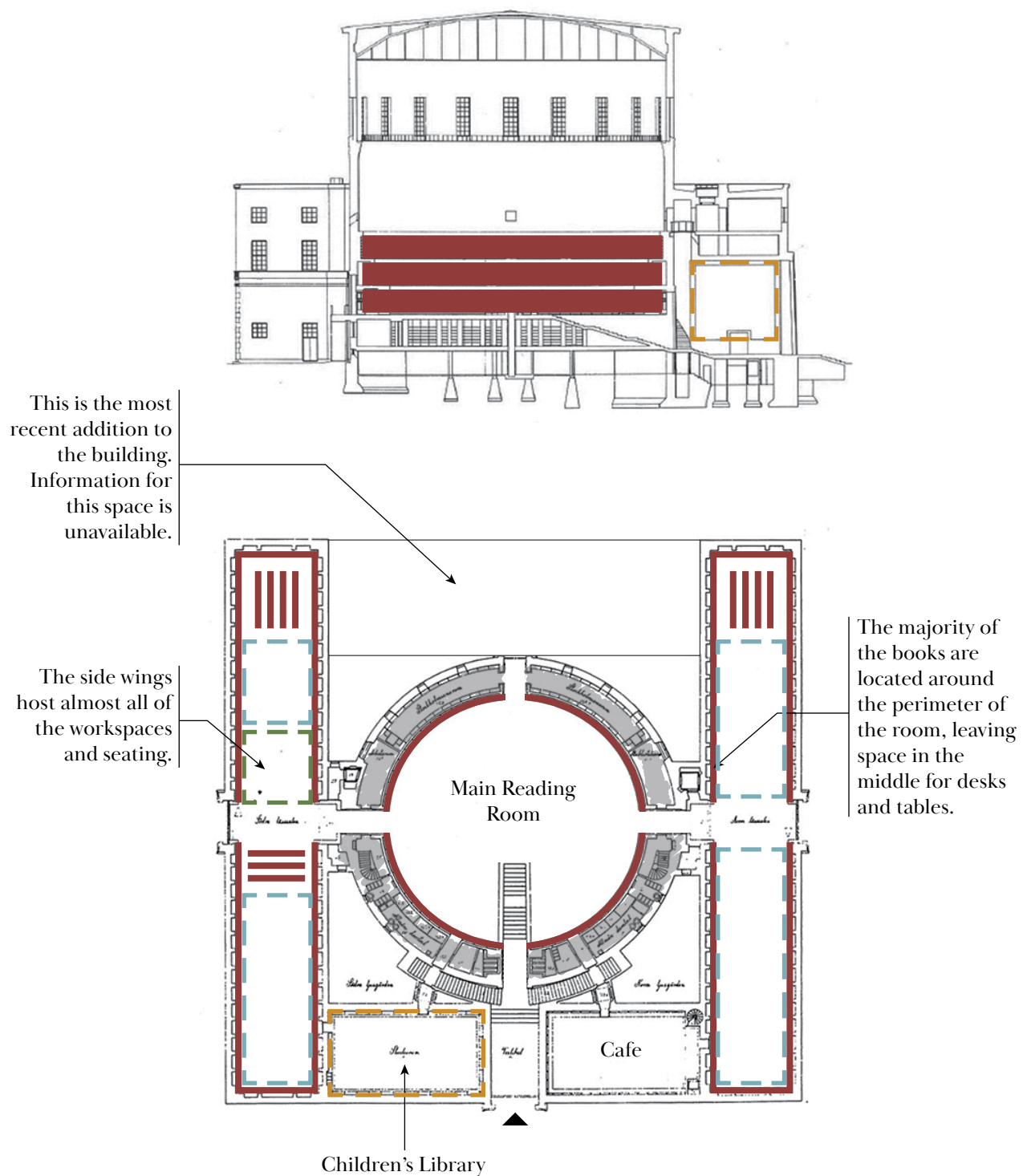


Figure 4. Main Floor Plan and Section of the Stockholm Public Library (1:500)

- Bookshelves
- Reading Area
- Back-of-house facilities
- Study Area
- Children's section
- Meeting/Study Rooms

TORONTO REFERENCE LIBRARY



Figure 5: Toronto Reference Library Atrium

RAYMOND MORIYAMA, CANADA, 1977

SIZE OF LIBRARY: 416,000 sf / 38,650 sm
NUMBER OF VOLUMES: 1.5 million volumes
CLASSIFICATION SYSTEM: Dewey Decimal

The Toronto Reference Library differs from other public libraries in that its collection cannot be checked-out and must be viewed in the building. This increases the need for proper workspaces and seating, as patrons will remain in the building in order to use the books. The design of this library reflects this, as a large variety of workspaces is provided. Architect Raymond Moriyama outlined his objective, stating, “the intent is to create a dignified and happy place for the mind, to encourage self-help, to allow people to explore and make their own connections.”³ He also described this building as a resolution of contradictions, balancing openness versus security, accessibility versus protection, individual versus groups, and efficiency versus involvement. The interspersed bookshelves and workspaces are all arranged around the main atrium, lit with natural light, anchoring the building. New additions such as quiet reading pods and thematic areas underscore the consistent care and maintenance of this 41 year old structure.

There is a diversity of workspaces provided, including tables, bar seating, and pods

Main Atrium cuts through all 6 floors

Workspaces located around the exterior, closest to the windows

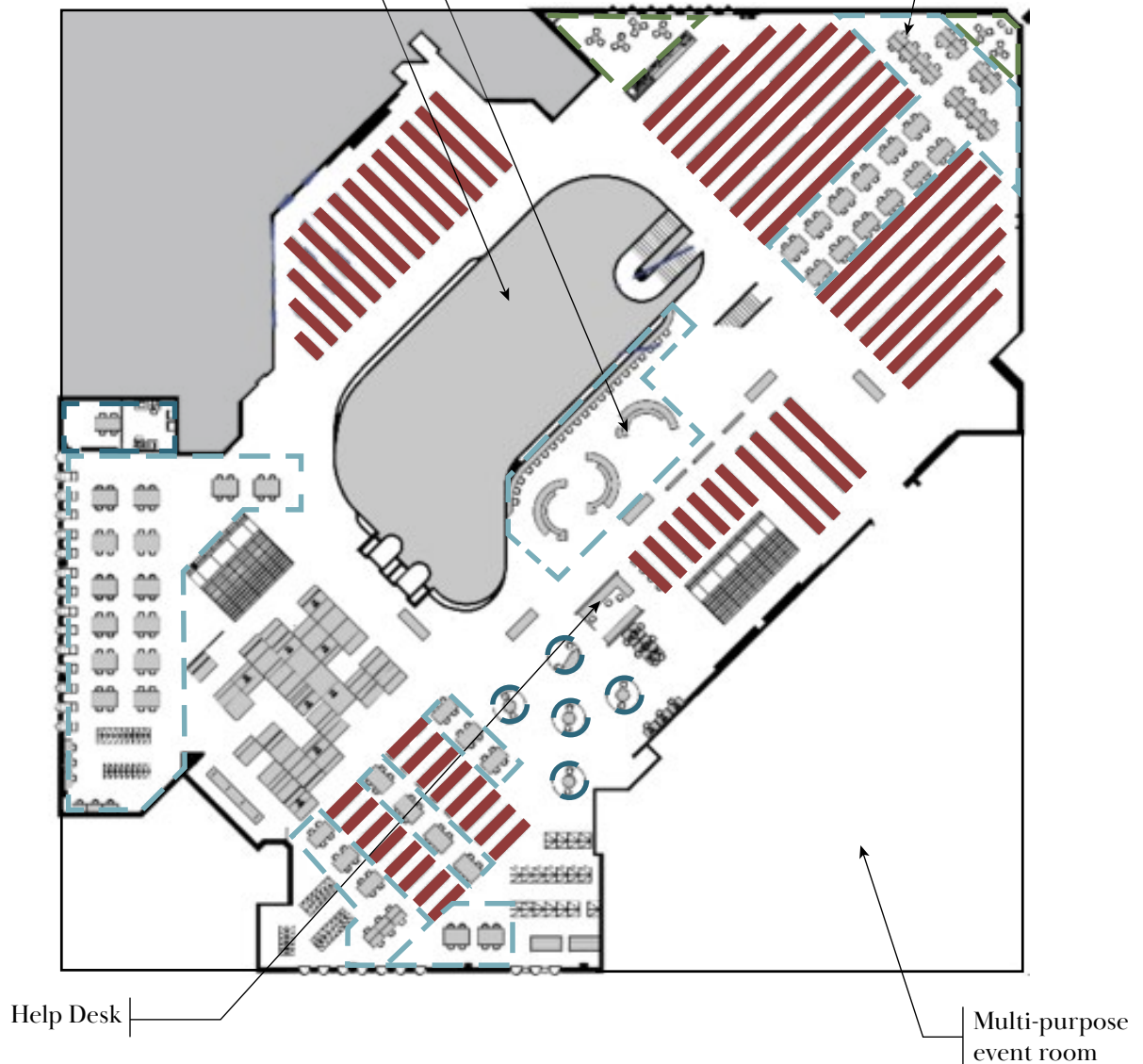


Figure 6. Second Floor Plan of the Toronto Reference Library (1:500)

- Bookshelves
- Back-of-house facilities
- Children's section
- Reading Area
- Study Area
- Meeting/Study Rooms

SEATTLE CENTRAL LIBRARY



Figure 7: Seattle Public Library

OMA, UNITED STATES, 2004

SIZE OF LIBRARY: 412,260 sf / 38,300 sm
NUMBER OF VOLUMES: 1.45 million volumes
CLASSIFICATION SYSTEM: Dewey Decimal

The service-based design of the Seattle Public Library seeks to define the library as an institution that is no longer exclusively dedicated to books. It acts as a community hub, hosting a wide array of activities and events, as well as its large amount of space for socializing and working. Confronting the changing library typology head-on, this library was organized into two program types: 'stable' (parking, staff, meeting spaces, book collection, HQ) and 'unstable' (children's section, reading room, and OMA's new concept—the 'mixing chamber').⁴ These 'unstable' services were designed to be more flexible and open for future changes. Grouping the library program by floor simplifies the building which eases navigation, but it can also disconnect the visitors from the collections, as the books are isolated in the book spiral, making it harder to browse. However, the innovative gesture of digitally displaying names of signed out books in the main space dramatizes the diversity and frequency of disseminated knowledge.

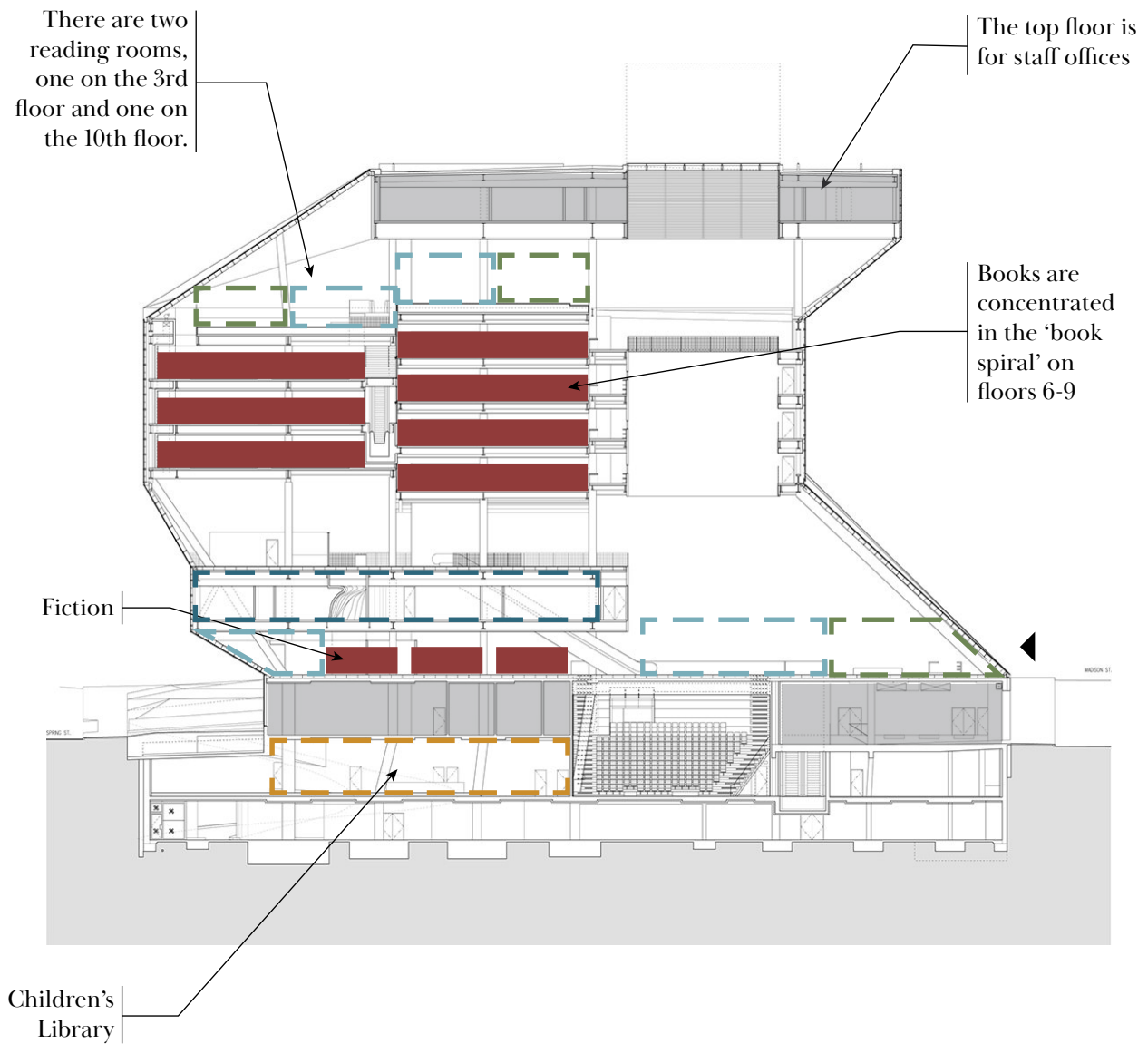


Figure 8. Section of the Seattle Central Library (1:500)

- | | |
|----------------------------|-----------------------|
| ■ Bookshelves | ■ Reading Area |
| ■ Back-of-house facilities | ■ Study Area |
| ■ Children's section | ■ Meeting/Study Rooms |

BIBLIOTHECA ALEXANDRINA



Figure 9: Bibliotheca Alexandrina

SNØHETTA, EGYPT, 2002

SIZE OF LIBRARY: 861,100 sf / 80,000 sm
NUMBER OF VOLUMES: 4 million volumes
CLASSIFICATION SYSTEM: Dewey Decimal

Referencing the ancient Great Library of Alexandria, the ancient Egyptian sun god Ra, and the cyclical nature of knowledge, this building was designed as a cultural icon for the city.⁵ This massive project includes four museums in the building, with a planetarium and conference centre on site. The tiered levels of connected space create one giant reading room which houses the majority of the workspace and seating. Alternating between desks and shelves, the level configuration provides an even distribution of workspaces throughout the building and places the visitors amongst the books. The space under the terraced levels is used for additional programming spaces such as meeting rooms, the children's section, museums and exhibits. Locating the offices higher up gives the librarians an excellent vantage point to view the daily life of the library, while also elevating and emphasizing their role. The vastness of the space and its prominent urban location asserts the library as a monumental structure and a cultural hub for Egypt.

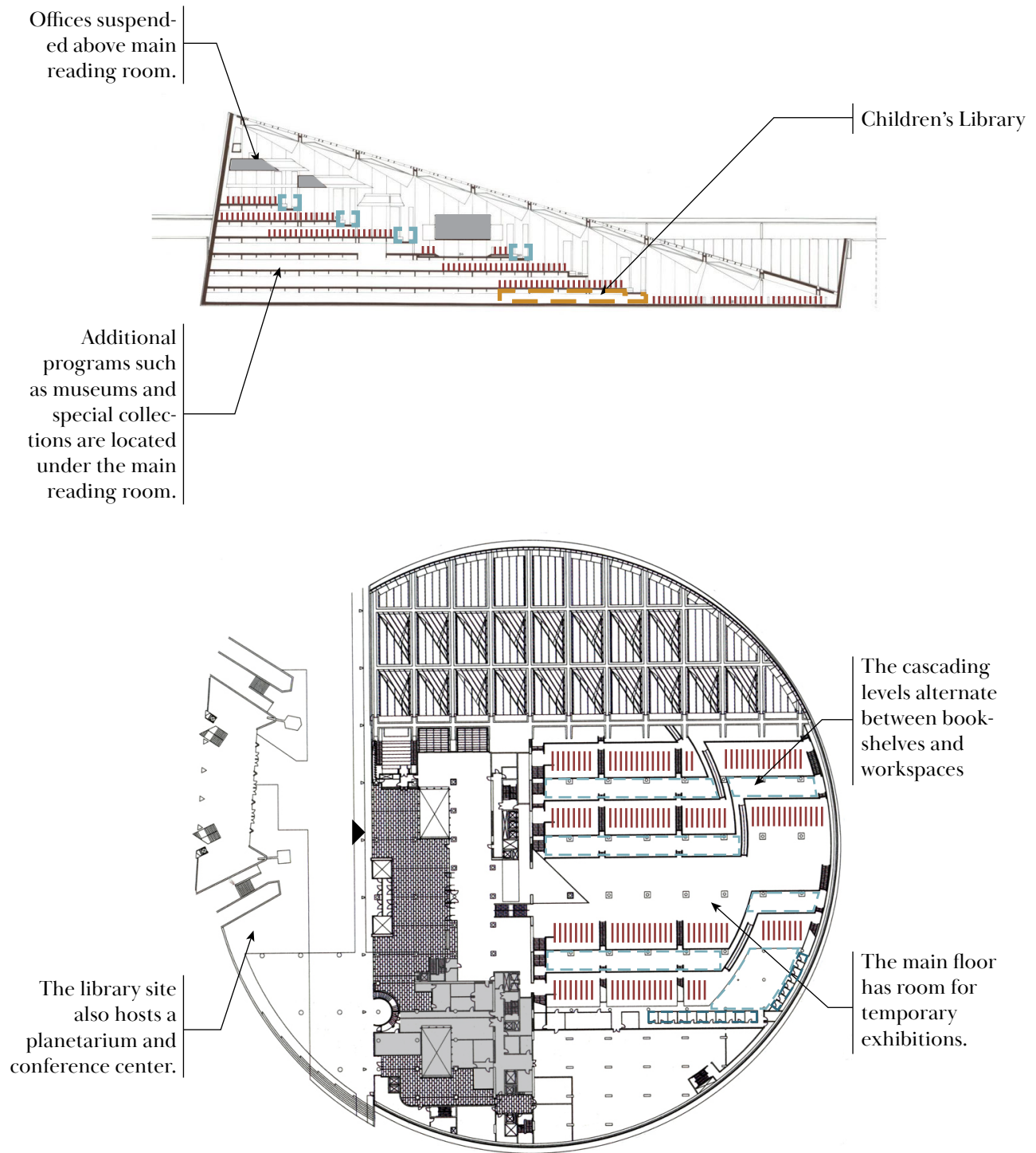


Figure 10. Main Floor Plan and Section of the Bibliotheca Alexandrina (1:1500)

CALGARY CENTRAL LIBRARY

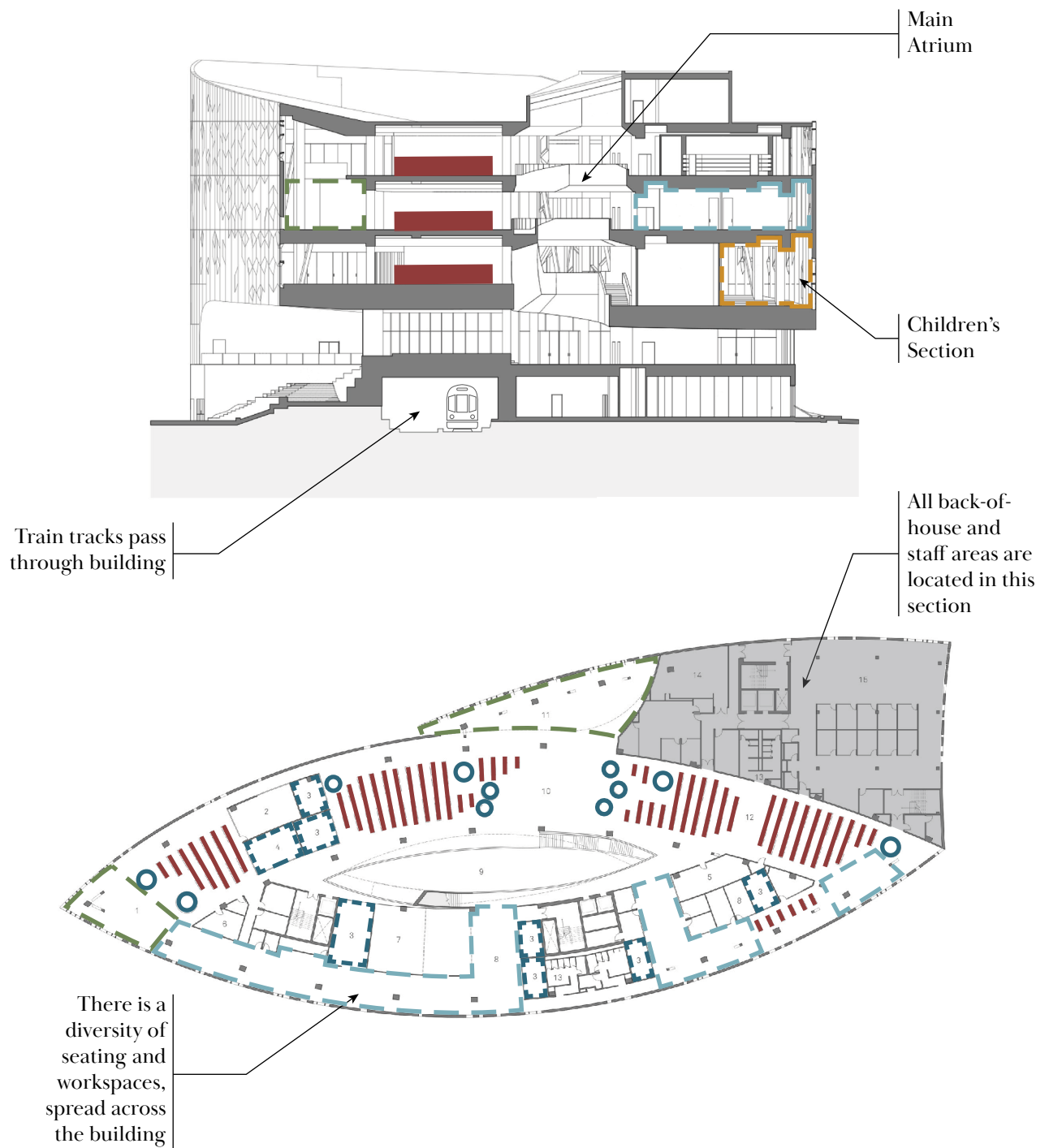


Figure 11: Calgary Public Library

SNØHETTA, CANADA, 2018

SIZE OF LIBRARY: 240,000 sf / 22,300 sm
NUMBER OF VOLUMES: 450,000 volumes
CLASSIFICATION SYSTEM: Dewey Decimal

Having just opened in November 2018, it may be too early to measure the success of the library, however the design was well intentioned and has some interesting features that make it beneficial to study. The building is situated across from the city hall—a central location downtown, with train tracks traversing through the site. In order to build on the site, the building was placed above the tracks, spanning both sides with the train running through the building. The library also unconventionally places the children's section on one of the upper floors, open to other areas and not contained to its own room in the basement as it usually is.⁶ The majority of the books are arranged on the east half, extending vertically across multiple floors. There are varying types of workspaces spread out across the building, with concentrated reading rooms in choice locations. The design focuses on diversity of spaces, thinking about individual, group, analog and digital interactions.⁷



*Figure 12. Third Floor Plan and Section of the Calgary Central Library
(Section at 1:500, Plan at 1:1000)*

- Bookshelves
- Back-of-house facilities
- Children's section
- Reading Area
- Study Area
- Meeting/Study Rooms

Analysis

These case studies are all libraries of national significance. While some focus to highlight their influence as a cultural monument, others target navigation and organization of the interior space. In comparing these five libraries, the similarities suggest potential reasons for why these buildings are successful, and the differences reflect choices that are either particularly advantageous to the library, or highlight a possible oversight.

All of these libraries studied possess three similar characteristics; a large main atrium, a central, downtown location, and an iconic design image. The large central atrium is an element of libraries that has existed since the 17th century, with the increasingly popular showcase of opulence and splendor.⁸ Although the ornamental element of these grand spaces has been toned down, the spatial dignity has remained a central part of libraries. The vastness of space signifies the library's importance and the wealth of knowledge that it contains. Having a large, central atrium acts as a way-finding element as well, opening up the space for sightlines, and creating a landmark that one can orient themselves around. This grand atrium also includes a main stairwell, connecting the floors and promoting use of the stairs rather than the elevator.⁹ In comparing the case studies, it can also be observed that each of these libraries is located in a central location, downtown. These are all libraries of national significance, and are consequently in major cities, however the choice of sighting allows them to be connected to public transit and to benefit from heavier foot traffic. These libraries are also all designed as an icon. With the exception of the Toronto Reference Library, their unique shape or facade makes them stand out amongst the urban fabric. Toronto's library facade is less of a monument than others, but the interior space of all the buildings studied proves to be an architectural icon that represents the city.

These buildings differ in a variety of ways, including their organization of space and the diversity of workspaces provided. Almost all libraries have the classic table and chair set-up, and include a few other options, including; large reading chairs, long desks, isolated workspaces, small group rooms, bar seating, etc. (See Figure 14) The range of seating can attract different types of users to the library, as some come to spend a few hours reading, some come to study, and others use the library as a space to socialize. The Stockholm Public library and the Bibliotheca Alexandrina are both less successful in this respect as they do not provide much variation in terms of seating. The Toronto Reference Library and the Calgary Public Library both offer many options, lending themselves well for diverse uses.

In almost all the buildings studied, the children's section was located in the basement, or was isolated from the rest of the library. The intention is to contain the noise so children do not have to be quiet and are allowed to play. Additionally, providing them with a defined space allows them to feel like they have a place of their own and they are not disturbing the rest of the library. However, in the Calgary Public Library, the children's section is quite central. The idea was to connect these two traditionally separate areas, so parents could watch their kids while they worked, and the children were not hidden.¹⁰ The dichotomy of concentrating distinct programs versus interspersing them is a prevalent issue in these case studies. At the both the Stockholm Public library and the Seattle Public Library,

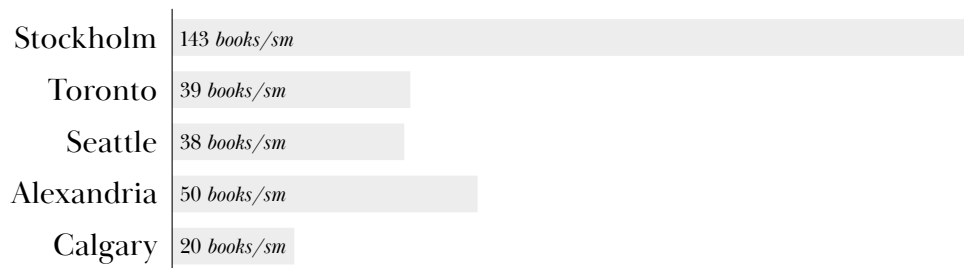


Figure 13. Ratio of books to total area

Comparing the number of books versus the gross floor area of the building illustrates the trend of increasing space in libraries. The Stockholm public library, being the oldest, has much less space per book, and the newest library—Calgary, has the largest wealth of space.

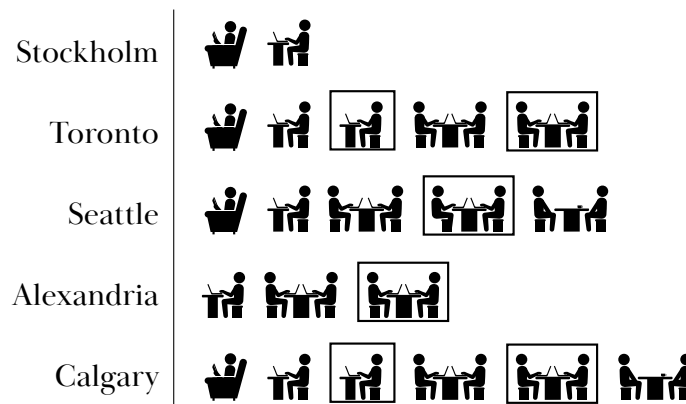
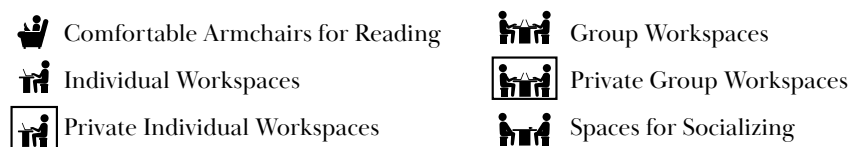


Figure 14. Diversity of seating

A comparison of the range in seating types provided at each of the libraries studied. The only seating that was universal is individual workspaces and individual seating. The variety of group versus individual, and private versus open workspaces has expanded in recent years, and these different types of seating are now common in 21st century libraries. Spaces for socializing is also newer library use, and is therefore understandable that it is only seen at two of the newer libraries — Seattle and Calgary.

spaces are organized and separated by program. In the Stockholm example, this is in part due to the common practice at the time the building was built. Bookshelves run the perimeter of the rooms while seating is located in the middle. In Seattle's Library, the design of the building was heavily influenced by the organization of program. The books are all contained in the 'book spiral'—stacks traversing four floors in a continuous spiral to not break the numerical organization of the collection—with the exception of fiction, located on the main floor.¹¹ Seating is located on the main floor and the 10th floor. Library services have their own floor (5th floor), as well as meeting rooms (4th floor). The extreme organization of spaces makes it easy to navigate, especially in large buildings like Seattle's Public Library. This system allows the library's resources to become extremely accessible, and while designs like the Seattle Public Library are excellent in allowing access to information—an integral piece of libraries—their isolated and separated programs are not as conducive to browsing, wandering, exploring and ultimately, discovering.

Other libraries, like Toronto Reference Library, Calgary Public Library, and Bibliotheca Alexandrina, take a different approach to spatial organization. In these buildings, the seating, workspaces, bookshelves and other rooms are dispersed throughout the library. The closer proximity of bookshelves to workspaces, for example, can be helpful when working as one can go back and forth without having to trek across the library. It also allows for a greater choice in seating when chairs are in multiple areas in the building. This decentralized approach can potentially hinder ease of navigation, but it's mix of program encourages users to explore parts of the library they otherwise wouldn't, increasing opportunity for discovery. This is especially important to libraries, as the promotion of curiosity, exploration and discovery better connects users with the information that is housed in the library.

Endnotes

[1] Bennett, Hannah. "The Psyche of the Library: Physical Space and the Research Paradigm." *Art Documentation: Journal of the Art Libraries of North America* 32. (2013). 179.

[2] Bennett, "The Psyche of the Library," 180.

[3] A.G.B. "Facilities & Design: Metro Toronto Library: Design Concepts to "Complete in Your Mind"." *American Libraries* 8, no. 8 (1977): 426-28.

[4] Joshua Prince-Ramus, "Behind the Design of Seattle's Library," filmed February 2006 in California, *TEDTalks*. 19:55.

[5] Langdon, David. "Bibliotheca Alexandrina / Snohetta." *Archdaily*. February 3, 2015.

[6] Dan Howarth, "Snohetta and Dialog's New Central Library for Calgary features vast wood-lined atrium," *Dezeen*. November 5 2018.

[7] Snohetta, "Calgary's new Central Library," *Snohetta.com*. 2018.

[8] Campbell, *The Library: A World History*, 115

[9] Promoting stairwell use is beneficial to the health of the individual—as it is exercise, but it also reduces overall energy consumption by limiting the use of the elevator.

[10] Dan Howarth, "Snohetta and Dialog's New Central Library for Calgary features vast wood-lined atrium," *Dezeen*, November 5 2018.

[11] Prince-Ramus, "Behind the Design of Seattle's Library."

CHAPTER 4

Contemporary Case Studies in Local Context

Following the study of five libraries of national significance, three local libraries have also been studied. These buildings have been selected for their proximity and similarity to the needs of Sudbury's public library. Located in Ontario, these libraries follow the same laws and building code and they serve similar populations. In addition to examining the organization of space as the previous projects did, these projects will also be studied for their specific programs offered, the allocated space for each program, the diversity of workspaces offered, and how the patrons use these spaces.

The local libraries studied are the Scugog Public Library, the Whitby Public Library, and the Orillia Public Library.

WHITBY PUBLIC LIBRARY



Figure 15: Whitby Public Library

PERKINS + WILL, 2005

56,000 sf / 5,200 sm

The Whitby Public Library System has two branch locations, plus a central location downtown—the library studied here. The central location includes additional collections plus features such as a public square, a cafe, and a local history museum and archives. The Whitby Public Library was visited on a Thursday afternoon (December 27th, 2018), and was moderately busy, with the most popular areas being the children's section and the computers. This library arranged its seating and workspaces around the perimeter, with the bookshelves occupying the centre floor area. It provides a large range in types of workspaces and seating arrangements, from study rooms, and carrels, to shared tables and lounge chairs, displaying a diverse set of options for visitors. Being a central library of 56,000 sf, it is the largest of the local case studies, and closest to the original estimate for Sudbury's new public library, which was ~70,000 sf.

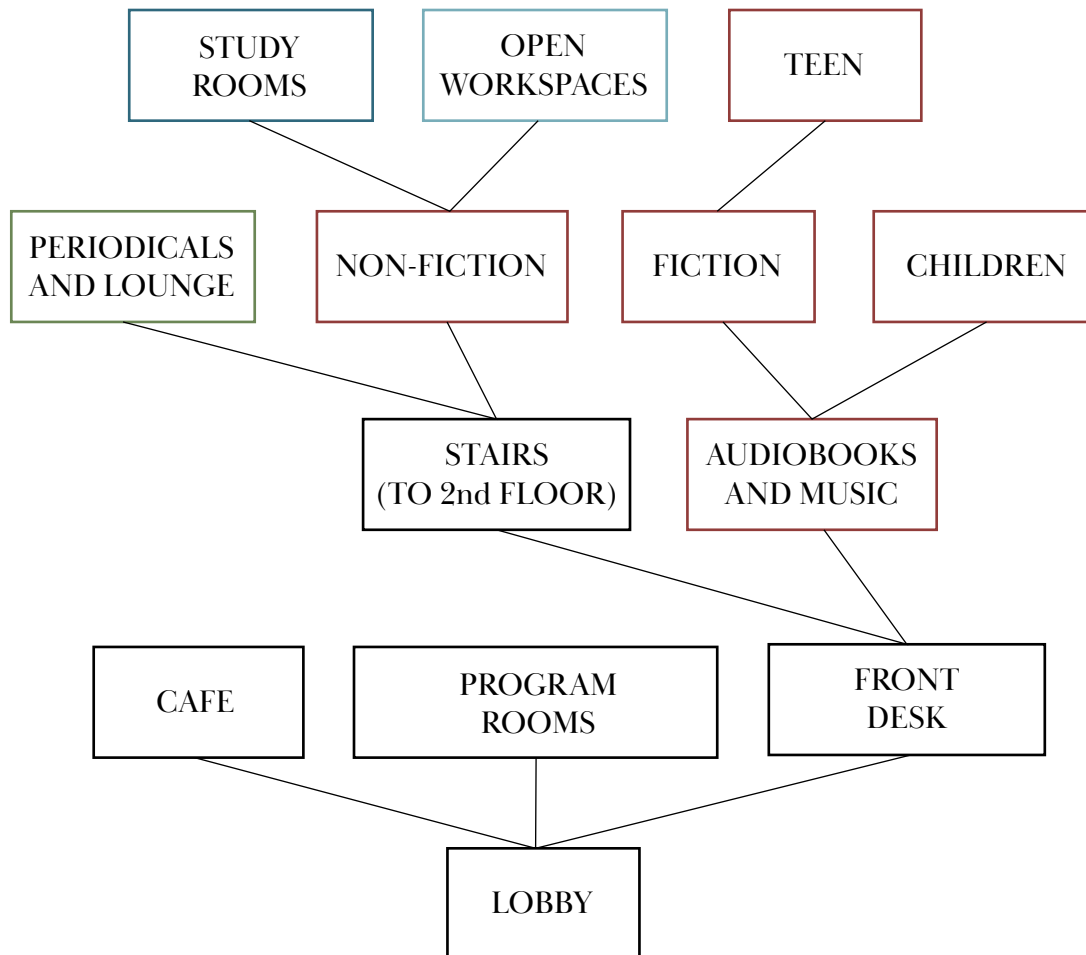
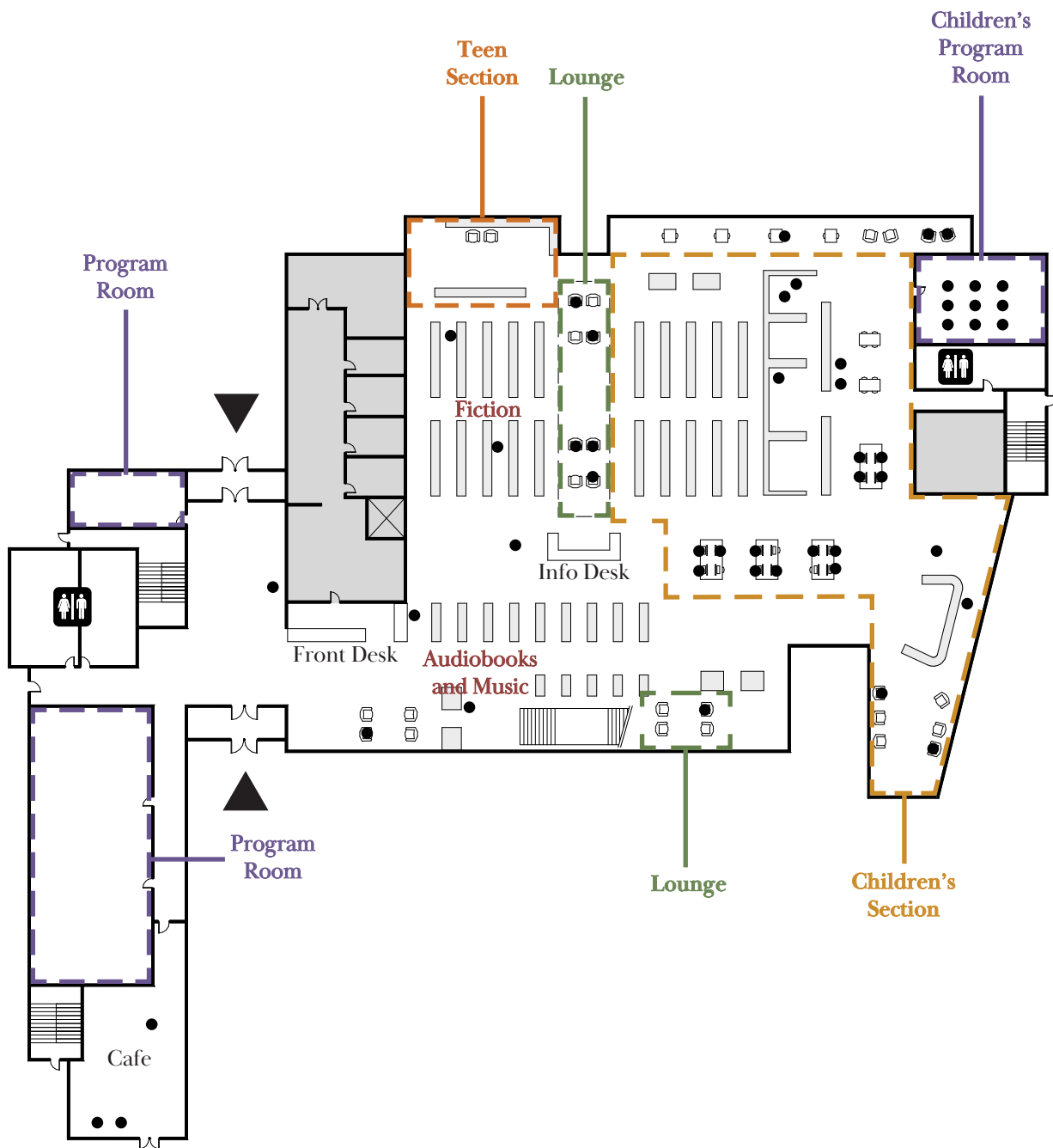
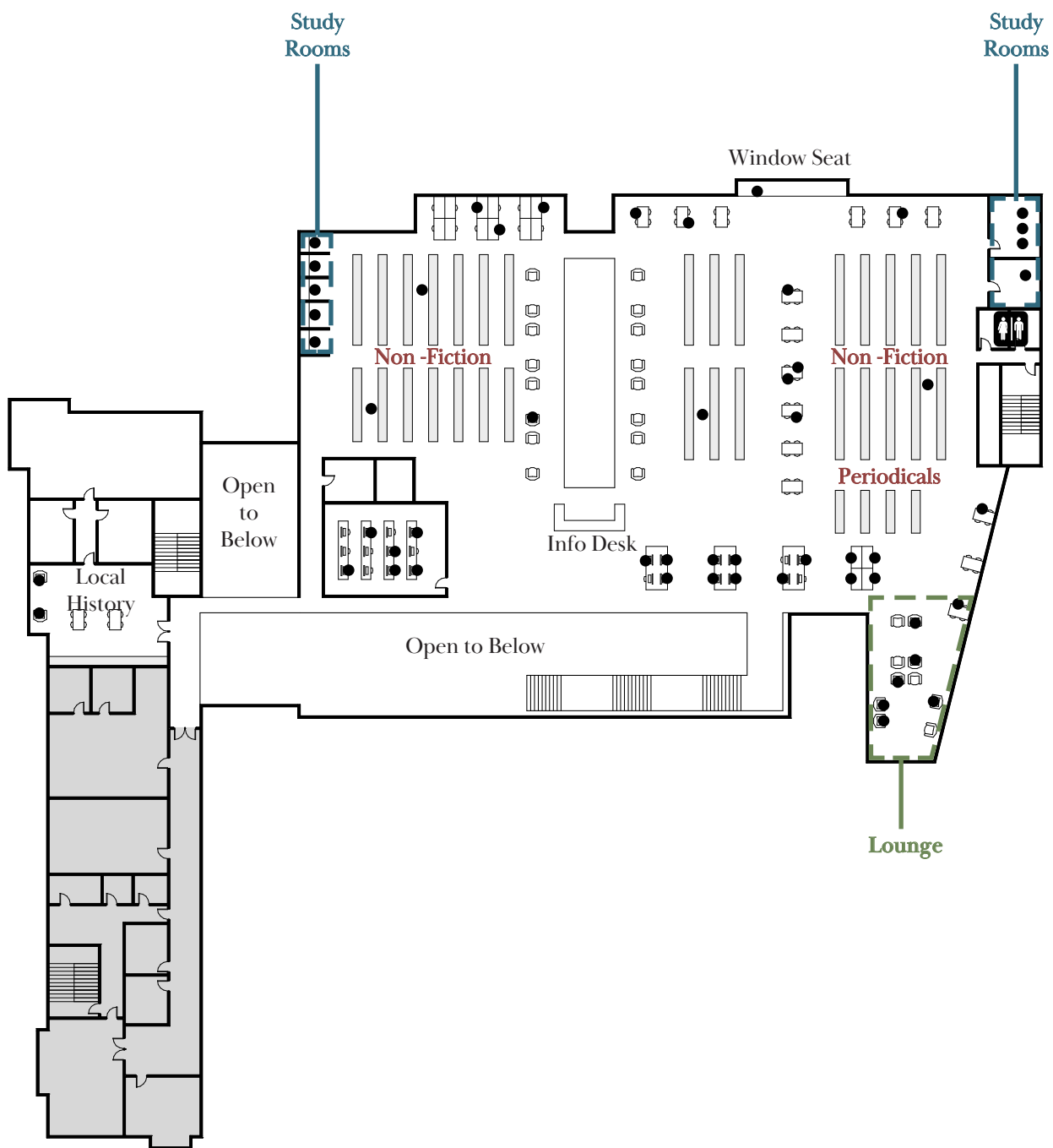


Figure 16. Spatial Syntax Diagram

This diagram shows the connections between different spaces in the Whitby Public Library. It gives a better sense of which spaces are adjoining and which are separate. From the diagram it becomes apparent that both the program rooms and the cafe are separated from the rest of the library, while the different book sections (fiction, teen, children, and audiobooks) are all closely linked. Spatial syntax diagrams also illustrate the public-to-private scale, with the most private rooms being at the top. At the Whitby Public Library, the study rooms, workspaces, and teen section are the most private spaces.



Ground Floor Plan
1:500



Second Floor Plan
1:500

Each black dot represents one person in the library at the time visited. This is an average of the number of people in each section over the time spent at the library.

ORILLIA PUBLIC LIBRARY



Figure 18: Orillia Public Library

PERKINS + WILL, 2013

42,000 sf / 3,900 sm

The Orillia Public Library is a single-building library system, meaning it does not have any branches. It is located downtown, beside a performance hall and a local farmer's market. The library building contains a room dedicated to the farmer's market that connects directly onto the market area, and also houses *Information Orillia*—an organization that provides community information and volunteer opportunities. At the time visited (Thursday morning on January 3rd, 2019), the children's area was the busiest section, and was obviously quite popular. This library had the largest children's section out of the libraries visited, and was separated into two tiers. The Orillia Public Library used different levels/floor heights to divide spaces multiple times, separating the children's section, and connecting the two floors through the use of a mezzanine that hosted the periodicals. Throughout the entire library there were long benches that ran along a window, appearing in the lobby, the mezzanine and twice in the children's section. They were used frequently for sitting, waiting, or watching the library activities and were one of my favourite features of the building. The Orillia Public Library is quite comparable to Sudbury in size, demographics, and isolation from other cities, making it very applicable for the new public library, and a great example of what it could be.

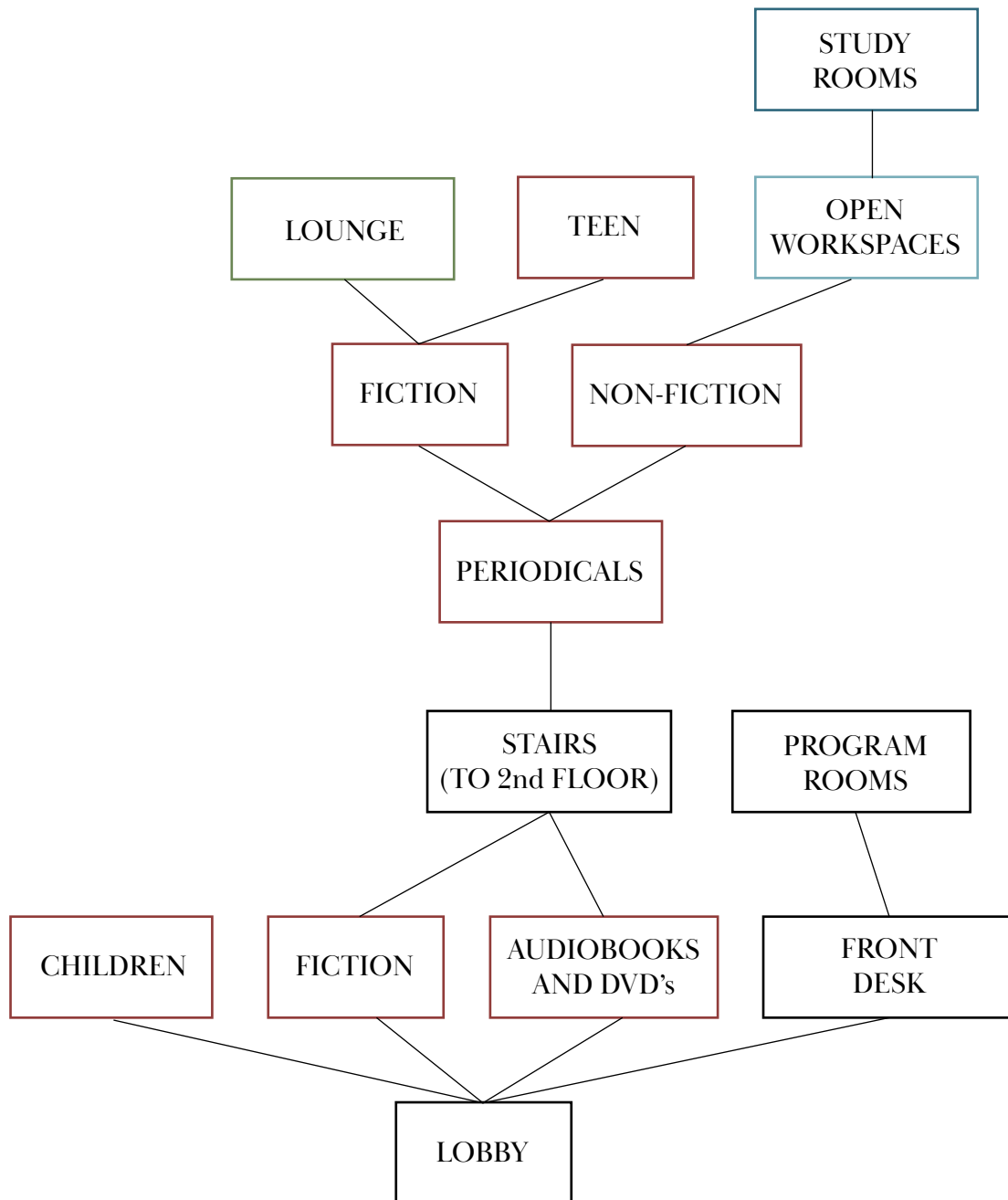
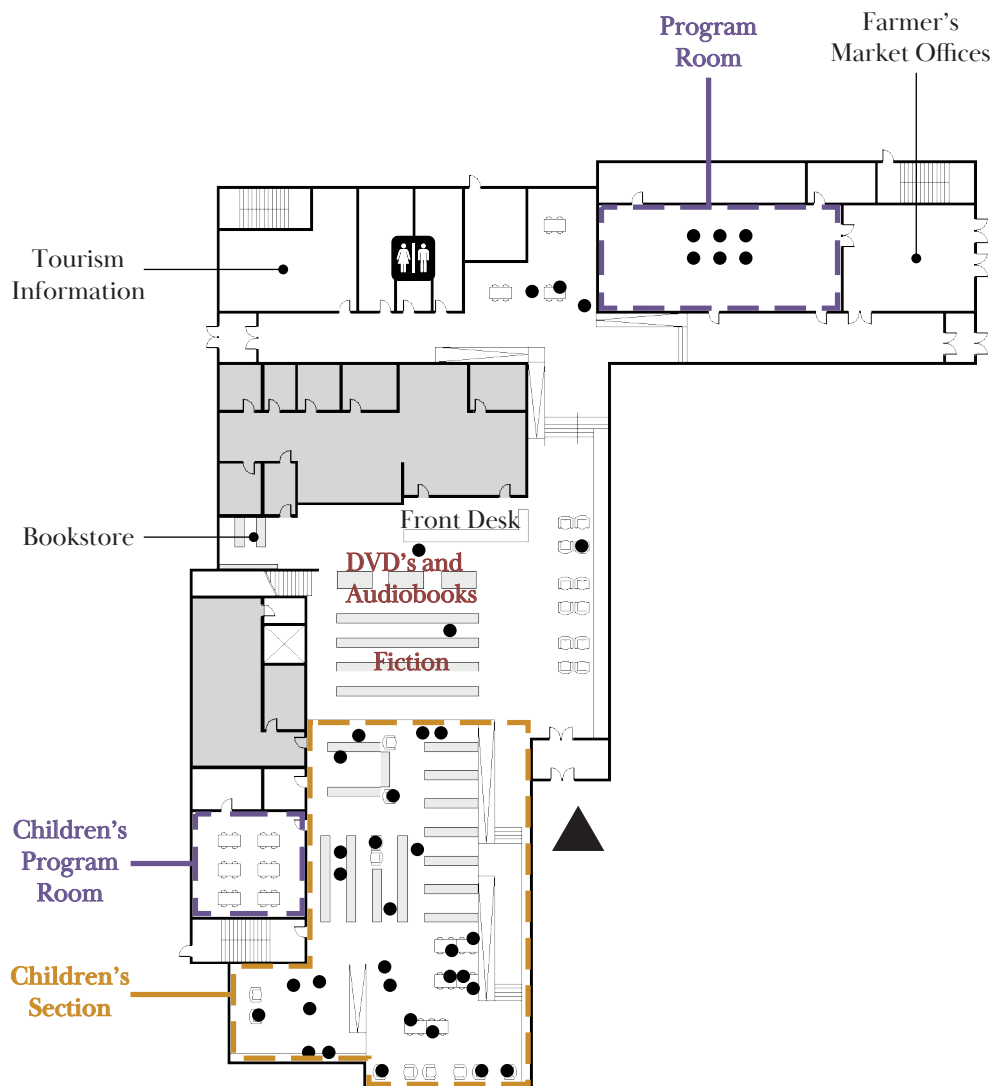
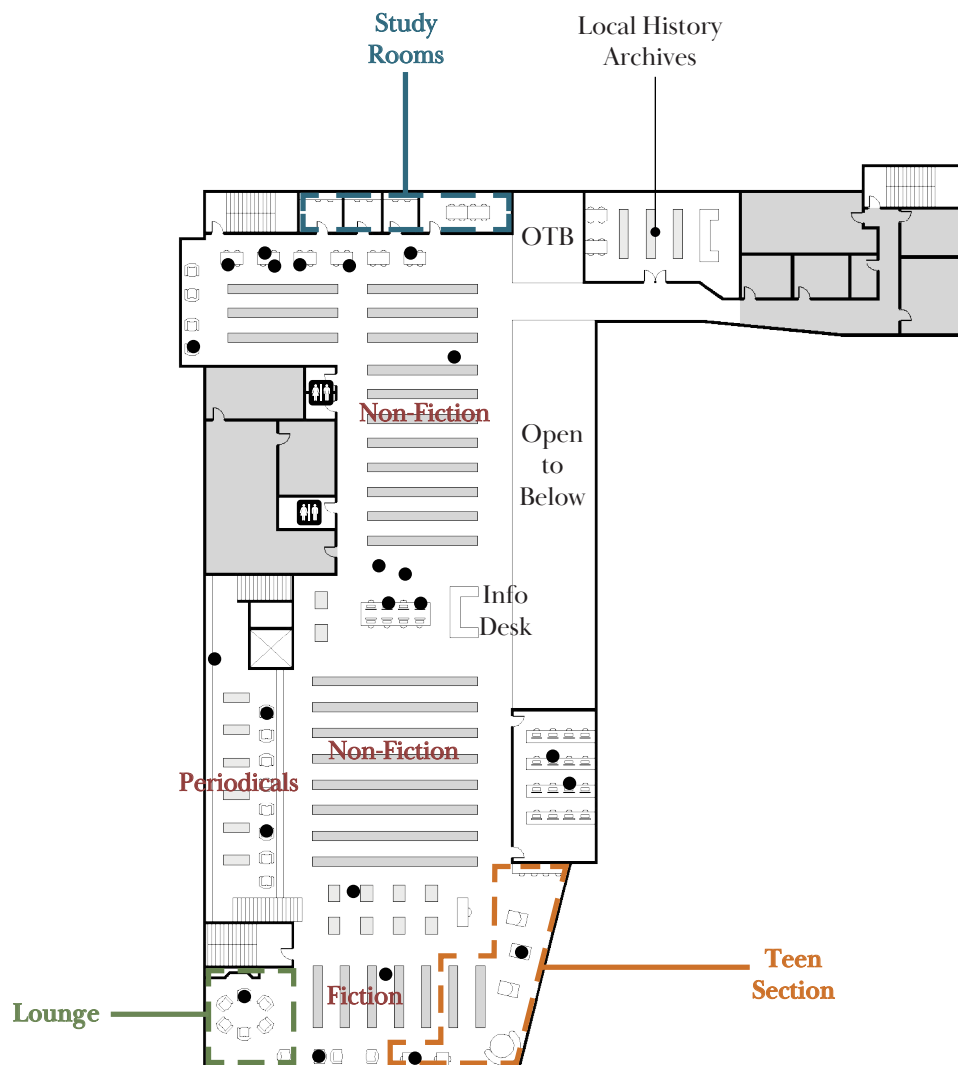


Figure 19. Spatial Syntax Diagram

At the Orillia Public Library, the different sections are less connected, creating a more linear spatial syntax diagram. This is better for privacy and control of noise, but can increase the difficulty of finding spaces. The main lobby is quite central, linking many sections, and both the children's section and program rooms are separated from the rest of the library. The placement of the study rooms, open workspaces, and the lounge at the top of this diagram make them all private spaces, which is beneficial for their intended use.



Ground Floor Plan
1:500



Second Floor Plan
1:500

Each black dot represents one person in the library at the time visited. This is an average of the number of people in each section over the time spent at the library.

SCUGOG PUBLIC LIBRARY



Figure 21: Scugog Public Library

SHOALTS + ZABACK, 2011

16,000 sf / 1,486 sm

The Scugog Public Library is located in Port Perry, which is the central hub for Scugog Township. It does not have any branches, concentrating its efforts into the one library. This library was visited on the afternoon of Thursday, December 27, 2018, for this study, however I have visited many times in the past as it is my home library in the town I grew up in. On the date visited, the library was less busy than normal, containing about 30 people in the whole building. The busiest areas were the children's section and the gallery, which was currently exhibiting Port Perry's famous gingerbread village—the most popular event of the year. The Scugog Public Library has four study rooms (pictured above) which are the most used areas in the library. These rooms each contain one table that seats up to four people, making them conducive to individual or group work. They have sliding doors to reduce noise, and large windows that look out onto the lake. Completely clad in wood, they are cozy and private while the glass keeps them from being too closed off, and connects them to the rest of the library. They are the most sought after space in the library, and are always full. The Scugog Public Library is smaller than the new Sudbury Public Library, but its relevance comes from its popularity and success in the community.

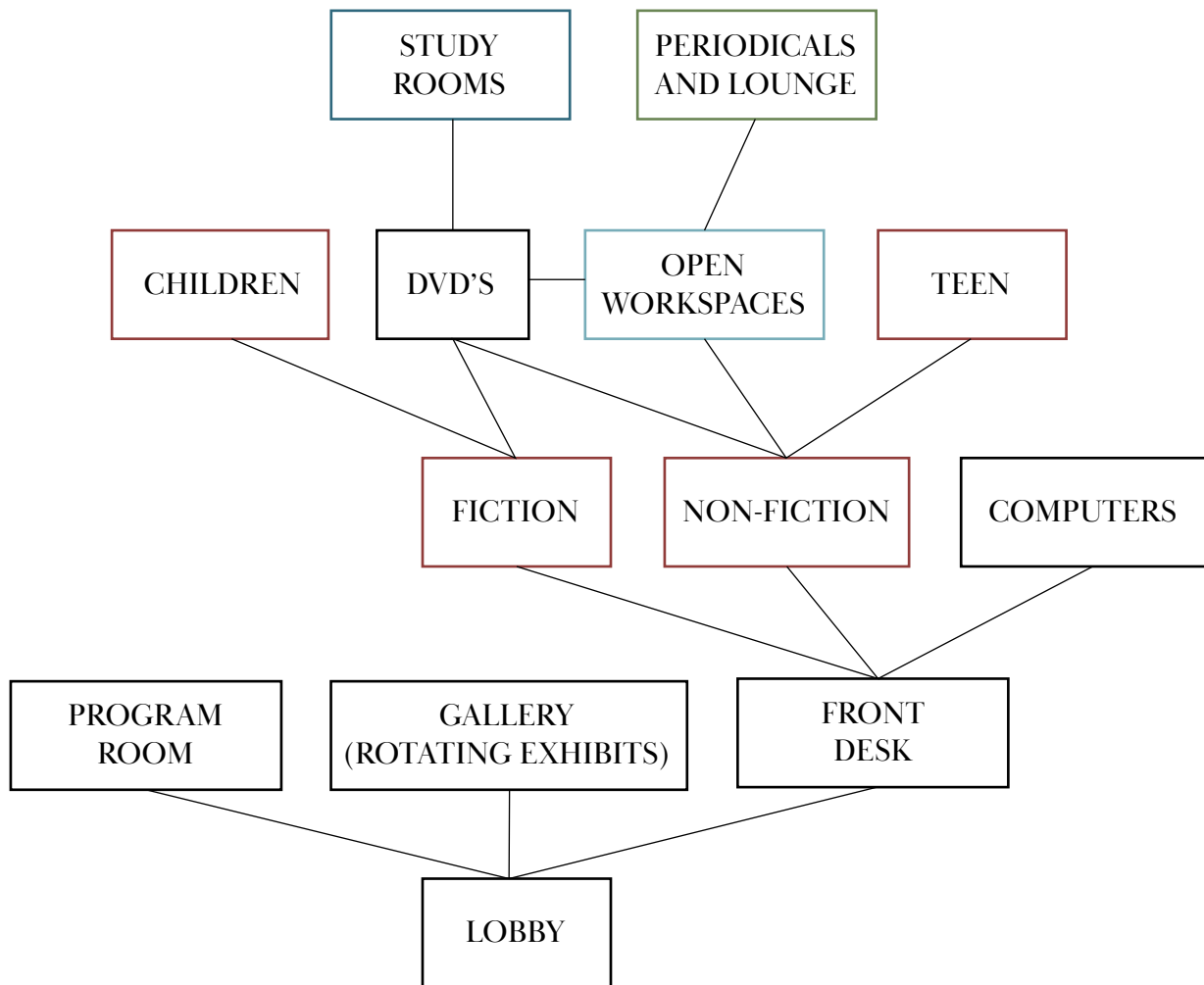
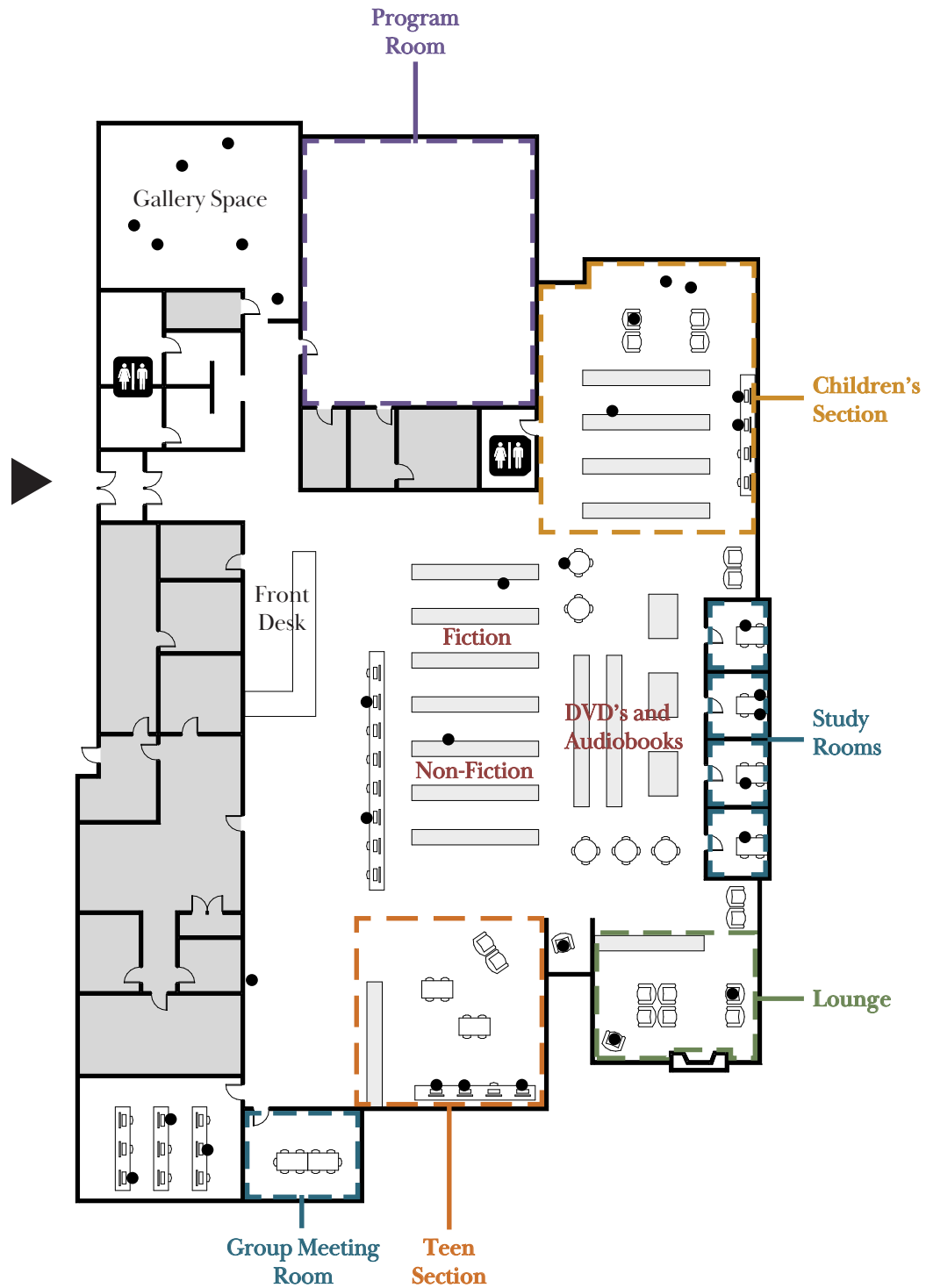


Figure 22. Spatial Syntax Diagram

In the Scugog Public Library, this spatial syntax diagram shows how the Program Room and Gallery spaces are isolated from the rest of the library, but are obvious from the front door, which makes sense considering their use. The open workspaces are quite central and connect three different areas, making them a potentially high traffic zone as people walk through to get to the lounge. In the case of this library, the study rooms and the lounge are the most private spaces, as they are both dead-ends and are furthest removed from the front door.



Ground Floor Plan
1:350

Each black dot represents one person in the library at the time visited. This is an average of the number of people in each section over the time spent at the library.

Analysis

In studying these three local libraries, a number of observations have been made regarding the types and size of different areas, the spatial organization of the library, and interesting features that either worked well, or were detrimental to the use of the space.

Children's Section

The children's section was consistently the busiest area in the library, with several families taking part in a variety of activities. In each library the children's section contained bookshelves that were shorter (making it easy for kids to reach, and for adults to see over-top) and sorted either alphabetically or by topic. It also had tables/workspaces for crafts, a play area with toys for the children and seating for parents, and a separate family washroom. In both the Whitby and Orillia libraries the children's section also had its own program room the size of a small classroom, which were both in use when visited. At each of the libraries, the children's section was busy, noisy, and very hands-on, with lots of toys, games, craft supplies, and puzzles to supplement the book collection. Overall these spaces seemed well designed and suited to their use, encouraging play and discovery.

It was interesting to find that the treatment of the children's section in the local libraries was much different than in the libraries of national significance from the previous chapter. In the national libraries, the children's section was tucked away, and completely separated from the rest of the library. In the local libraries, however, the children's section was not isolated, but fairly prominent and close to the entrance. This could be in part due to the reduced size of the local libraries—making it harder to separate and isolate different sections, but could also be representative of the different goals of national versus local libraries. In national libraries, there is a greater importance placed on cultural significance and representing the wealth of the nation, whereas local libraries are more focused on serving their immediate community.

Teen Section

The teen sections were quite opposite from the children's sections in that they felt underwhelming and haphazard, remaining void of any teenagers during my visits. Usually tucked in a corner, the teen sections contained shelves that hosted the teen book collection, and some furniture. The Scugog Library also had a gaming console area, and a row of computers making it the most popular of the three libraries. The Whitby Library I would rank the lowest of the three, as the teen section was located in the back corner and provided minimal seating and no workspace or computers, discouraging anyone from spending any time in that area. Teens were instead found mostly at the computers, with some at tables in other parts of the library.

Staff Spaces

This survey surprisingly revealed a large amount of space needed for back-of-house facilities, which includes offices, storage, and circulation/book sorting areas. While I could not access these areas on my visits, the plans of the buildings provide sufficient information on the layout and use of these areas. The back-of-house facilities are all located together at the Scugog

library (probably due to its smaller size), but are broken up and dispersed around the Whitby and Orillia libraries. In both these buildings the book sorting and a few offices are connected to the front desk, with the majority of offices and meeting rooms on the second floor. All three libraries also had information desks which were separate from the front desk, and had a librarian there at all times to answer questions and help visitors, leaving the front desk solely for check-outs and membership concerns.

Seating

Each library provided a range of seating types, including at minimum; a lounge area with armchairs, tables with chairs seating up to 4 people, and private study rooms for 1-4 people. The Whitby library also provided study carrels (similar to tables but with dividers between seats) and semi-enclosed study rooms, expanding the variety of workspaces. Different seating types can attract different users, as needs vary depending on the task. Armchairs are best suited for reading, and library lounges are designed for this purpose, but window seats, nooks, and tables can also be preferred by some users. For users who bring a laptop, the tables and study rooms are usually thought of as optimal for this task, however there are people who prefer sitting in an armchair or on a bench seat, and designing for this by installing plug outlets and even a fold-up or swinging surface, gives them the freedom to occupy whichever space they desire. All of the libraries studied have flexible seating and chairs that can be rearranged, which was observed during my visits, as many of the chairs were constantly dragged to different places by each new user looking for peace and quiet, a better view, or to get out of the sun.

Spatial and Architectural Qualities

Parallel to the case studies of national significance in the previous chapter, the local libraries also had a large main atrium, a central downtown location, and an iconic design image. The double-height entrance lobbies accentuated the grandness and importance of the building, while also creating a contrast between the it and the small, cozy reading areas. All three of these libraries played with ceiling heights to alter the feeling of the spaces created and to divide sections. Each of these libraries were located in a prominent location in the downtown area of their respective cities. They were connected to public outdoor space that was used for a community purpose, whether it be a farmer's market, a civic square, or a waterfront park. The building's facades are majority glass curtain walls, creating a sense of transparency where the public can see into the building to know what is going on, and to give views outside, as much of the seating is arranged around the edge of the building. Both their location and iconic design make the library a prominent feature in the community, drawing attention to itself, making it easy to find, and also symbolizing the importance of knowledge.

Spatial Organization

When looking at the spatial organization of these local libraries, the spatial syntax diagrams provide a valuable analysis of the relationships between the different sections. Comparing these diagrams from each of the three local libraries, six general observations were made. (1) The program rooms and additional non-library spaces (such as the gallery, cafe, or farmer's market) are directly off the lobby, separating themselves from the main library spaces. (2) The fiction and non-fiction sections are not necessarily together. Fiction is closer to the main entrance while non-fiction is further

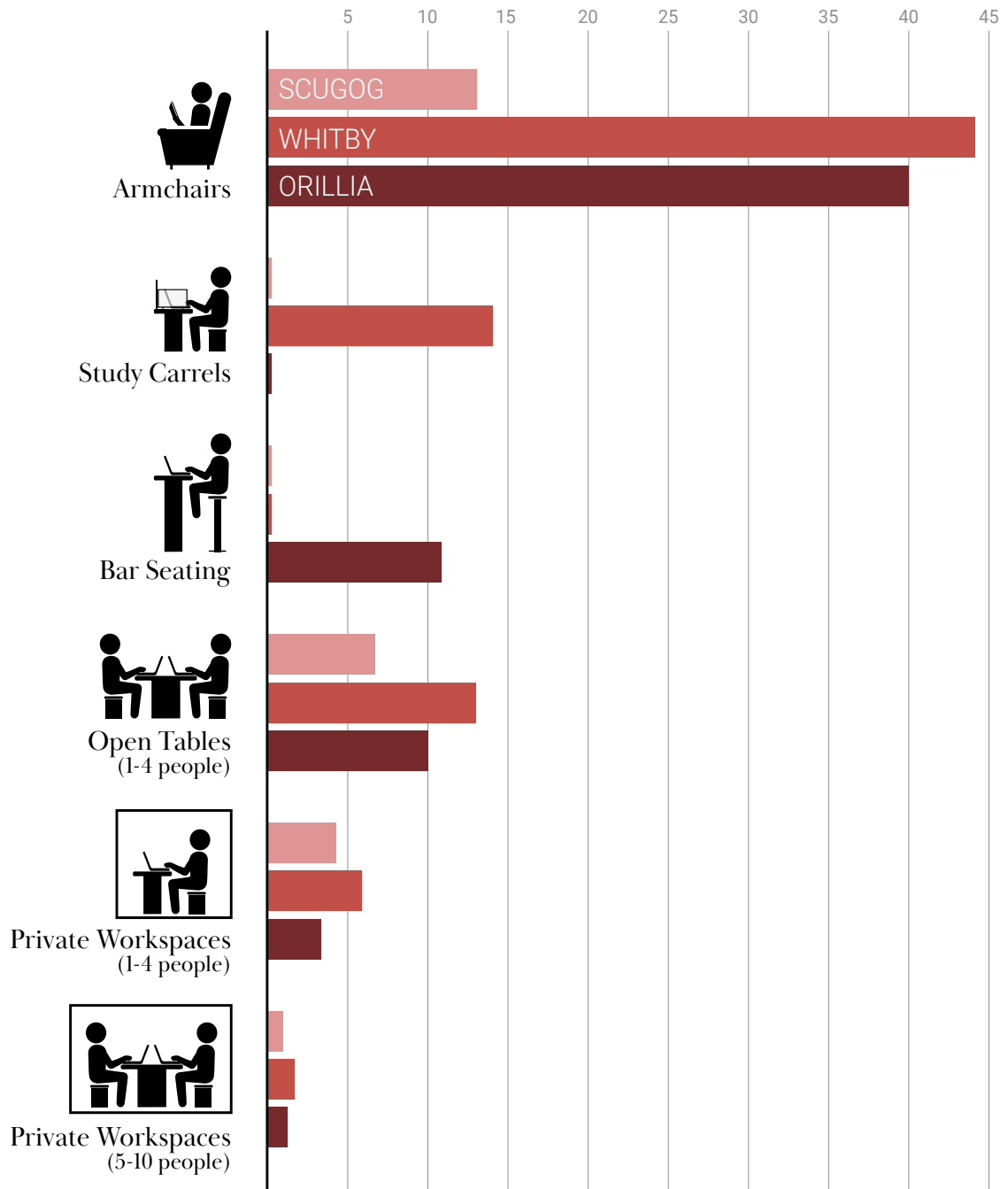


Figure 24. Seating Analysis

This diagram shows the number of each seat type provided in each of the three libraries studied. From the diagram it is clear that armchairs are the most common type, followed by open tables with seating up to 4 people.

away. (3) The children's section, study rooms, and lounge are always dead-ends, meaning they never lead to another space and therefore have less traffic and distractions. (4) The periodicals are beside the lounge, which, in the case of these three libraries, also contained a fireplace. (5) The audiobooks/DVD's/music collections were often located near the main entrance and had to be walked through to get to many of the other areas of the building. Their prominent location within the library was surprising to me as I had not expected them to occupy such a conspicuous space. (6) The non-fiction section was often broken up with sections of open workspaces, and the study rooms were also adjacent to this area. This makes sense considering all three of these sections are used for the same purpose—working/studying.

These spatial arrangements may be configured this way for a particular reason, or for number of unrelated reasons, however in identifying these trends I can further analyze the spaces, speculating as to why this is a pattern, and decide if the arrangements make sense for the new Sudbury Library.

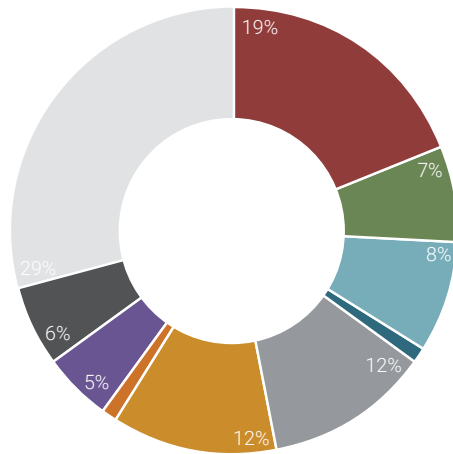
Breakdown of Space

By sectioning and recording the amount of space designated to a specific use in each library, the allocation of these spaces can be further analyzed across the three local libraries. (see figure 25) Through the diagrams, it becomes apparent how little space the bookshelves occupy compared to the rest of the library, with much of the library area being used for reading, working, and other activities. This exemplifies the trends of the twenty-first library discussed in chapter two, where public libraries are no longer just about the physical books, but have expanded to provide more space for working, reading, and community programs.

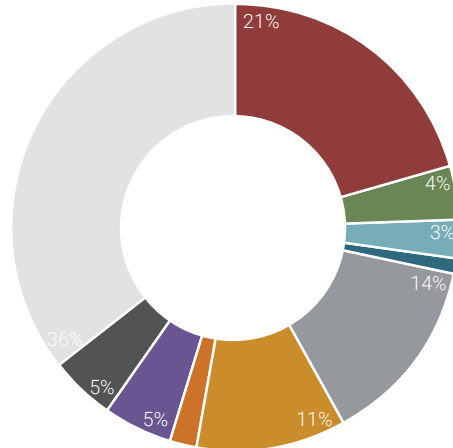
The large amount of area dedicated to 'other' (light gray), which includes washrooms, miscellaneous spaces and large circulation corridors, illustrates the generosity of space. These hallways, staircases, and large corridors not only allow for large numbers of people to move around, but also create an element of grandeur and prestige. This spatial dignity is typical of public libraries, and is an important part of their identity.

The back-of-house facilities (gray) are also a fairly large piece of the library, taking up almost as much space as the books themselves. This area is mostly made up of offices, with some space dedicated to book sorting and to staff meeting rooms and storage. While the largest four categories remain consistent (other, bookshelves, back-of-house facilities, and children's section), the five smaller categories vary depending on the library. At the Whitby public library, both the reading areas and open study areas cover about 7% of the building area, and the study rooms and teen section are the smallest, occupying 1% of the total building. Orillia's program rooms are similar to Whitby's, however its reading and study spaces are much smaller, comparatively. The Scugog library has a large program room, with a more even distribution of study rooms, reading areas, and study areas.

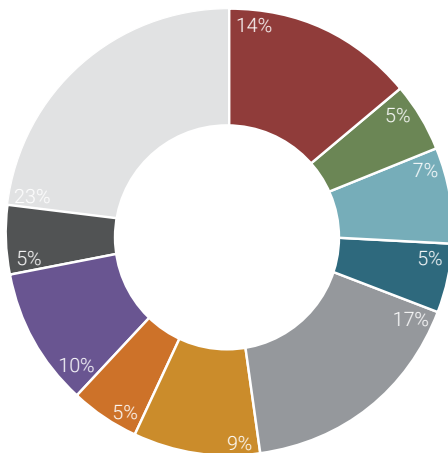
These diagrams reveal an understanding of the break-down of spaces within the library, and will provide a basis for the proposed public library for Sudbury.



Whitby



Orillia



Scugog

- Bookshelves
- Back-of-house facilities
- Children's section
- Teen Section
- Reading Area
- Open Study Area
- Meeting/Study Rooms
- Program Rooms
- Non-Library Uses
- Other*

*includes large circulation corridors, washrooms, and miscellaneous spaces

Figure 25. Floor Area by Usage

These diagrams reveal the break-down of floor area by use. Each full circle represents 100% of the space, and is then divided, by percentage, into the outlined categories.

CHAPTER 5

Defining Discovery

The contemporary library is a place to access information, and in the expansion of services, workshops and programs, collection formats, and physical space, information has become exceedingly accessible. Broadening the definition of information to include a variety of formats and activities, public libraries have become an information interface, making it easier than ever to find what you are looking for.

Access to information is not only about being able to find an item, but encouraging interaction between the public and the collections. Libraries need to entice people to come inside and look around, even if they don't have a specific search query. Unexpected interactions are often great opportunities for learning, and can occur in the absence of precise inquiries. The purpose of public libraries is to provide the public with free access to knowledge; but to fully achieve this goal, the library must attract and promote interactions between people and the information, facilitating connections between disciplines and programs to promote exploration, encourage curiosity and elicit discovery.

How can public libraries encourage discovery? This question becomes the basis for this thesis, as it further explores how to achieve the goal of providing access to information. Discovery can be initiated through the subversion of spatial awareness—the act of getting lost/losing yourself. This can occur as a cognitive experience, as a physical experience, or as a combination of the two. For many of us, the act of discovery on a cognitive level begins in the space of a book. Fiction, non-fiction, or any other genre can lead the reader into adventures of imagined ideas. On a physical level, it begins with an investigation or heightened awareness of your own surroundings that becomes more haphazard or accidental than a rigid and linear process. Alternatively, the used bookstore is one of the best examples of a place that elicits discovery through both cognitive and physical forms, uniting to create a space full of mystery and curiosity. It is the used bookstore that serves as an example of how discovery can be encouraged, which can then be applied to libraries in a similar fashion.

“Not to find one’s way in a city may well be uninteresting or banal. It requires ignorance—nothing more. [...] But to lose oneself in a city—as one loses oneself in a forest—that calls for quite a different schooling. To lose yourself: a voluptuous surrender, lost in your arms, lost to the world, utterly immersed in what is present so that its surroundings fade away. [...] To be lost is to be fully present, and to be fully present is to be capable of being in uncertainty and mystery. And one does not get lost but loses oneself, with the implication that it is a conscious choice, a chosen surrender, a physis state achievable through geography.”¹

Lost in a Book

Books have the ability to completely absorb us, removing us from our world and transporting us elsewhere. Their subversion of spatial awareness comes from their ability to fully captivate us in the story. Fiction, especially narratives, are most conducive to this effortless concentration, but all books are capable of doing so. The phrase ‘lost in a book’ is interesting because when reading, one is never physically lost. It is a cognitive disorientation initiated by an intense concentration, where an imagined world is so vivid it completely dominates reality.

“Like dreaming, reading performs the prodigious task of carrying us off to other worlds. But reading is not dreaming because books, unlike dreams, are subject to our will. They envelop us in alternative realities only because we give them explicit permission to do so.”² Because this form of disorientation is not physical, there is an illusion of greater control, and thus, less worry. To exit the fantasy, the assumption is that all one must do is close the book, however literary devices like cliffhangers and other mechanisms are used to keep the reader enthralled.³ It can be just as hard to put down the book, however we continue to do it for our own enjoyment. Although it is usually seen as a negative, becoming lost is something done for fun as well—whether in a book or a building, as long as people feel safe, they are not only willing to subvert their spatial awareness, but want to do so for their own enjoyment.

Figure 26: Imagination >

This illustration represents a book’s ability to completely captivate and absorb the reader, transporting them to another world, and how readily and excitedly we take part in this form of disorientation for our own enjoyment.



Lost in a City (The Dérive)

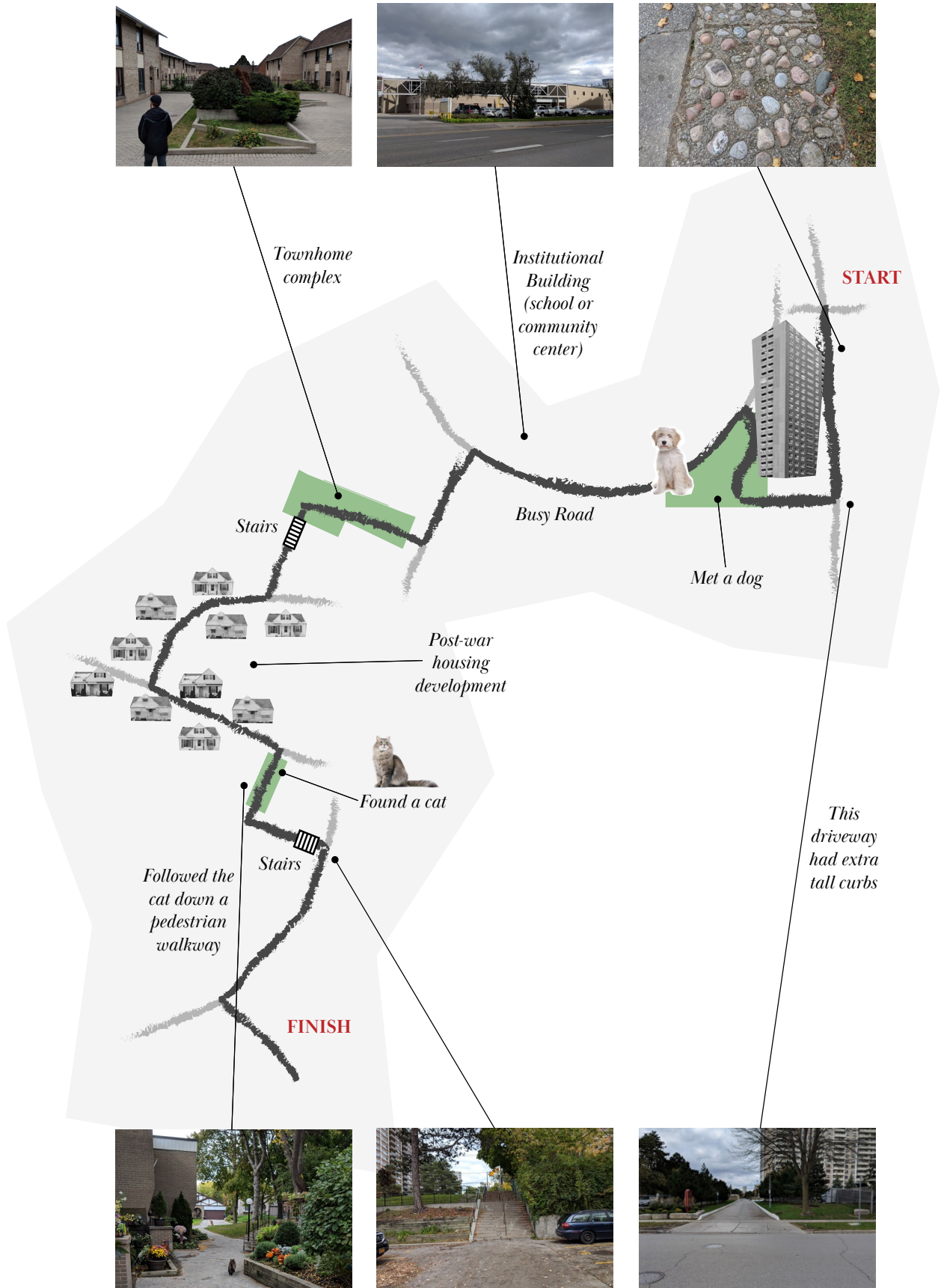
There is a romance around getting lost in a city—wandering the streets as a form of discovery. This is a popular concept in travel journals, as stumbling upon an interesting event, a beautiful view or a new restaurant, generates a curiosity that drives the exploration. It is the unexpected surprise that creates intrigue and suspense, as each moment is unpredictable. With no set path in mind, one is free to absorb their surroundings, observing small details they may not have noticed otherwise.

Postmodernist theorist and philosopher Guy Debord was fascinated with exploring places that seem boring or banal, and advocated for interest in the everyday life.⁴ Debord, along with his group *Situationist International*, used a method called the Dérive to explore the city, as an act of discovery. “In a dérive one or more persons during a certain period drop their relations, their work and leisure activities, and all their other usual motives for movement and action, and let themselves be drawn by the attractions of the terrain and the encounters they find there.”⁵ The Dérive is similar to a casual stroll, but requires an active awareness of psychogeographical effects.

The Dérive forces a disconnection from the world by focusing on the immediate surroundings. This method of deliberate disorientation promotes discovery, and becomes a source of pleasure for the participant.

Figure 27: Dérive Experiment >

To fully understand the concept of the Dérive, I conducted my own. Starting at the Fairview Branch of the Toronto Public Library, I wandered through neighbourhoods, absorbing my surroundings. Each decision for where to go next was not determined by anything specific, and was usually just the nicest or most interesting path. I wandered for 45 minutes before stopping to record my travels. To the right is the route I drew and the most memorable encounters I found. The route is not geographically correct as it represents my own perception of the path taken.



Lost in a Bookstore

Used bookstores are one of the best spaces for encouraging discovery, as they merge both the previous two examples, uniting both cognitive and physical forms of disorientation. Being quite similar to libraries in function, they provide a wealth of inspiration for libraries to draw upon.

Used bookstores are often organized by their owners, and books are grouped together by category, by author, or however the owner sees fit. They are less about finding a specific book, and are more about the serendipitous experience of browsing. As Theodore Dalrymple describes in his article in *The Telegraph*, “The joy of finding something that one did not know existed, and that is deeply interesting or connected in a totally unexpected way with one’s intellectual interests of the moment, is one of the great serendipitous rewards of browsing, and one unknown to those who take a purely instrumental view of bookshops, leaving them the moment they discover that they do not have the very book that they want.”⁶

Because bookstores are packed full of books—especially used bookstores, there is an element of physical disorientation to the space. Rounding a corner only to discover another room or nook tucked away, or a small staircase winding up to another floor, adds to the excitement and encourages exploration. The discovery of finding books becomes heightened by the discovery of the space. Both the mental and physical work together to create a place that is full of wonder, mystery and excitement.

Figure 28: Westsider Rare & Used Books >

This bookstore, located in New York City, exemplifies the feeling of serendipity created by both the mental and physical disorientation of the space. It invites you to explore, browse, and become completely absorbed into another world, whether that be a book or the bookstore itself.



Disorientation is a tool that can be used to create pleasurable experiences and encourage discovery. Although it is often associated with fear, stress and anxiety, these examples demonstrate positive forms of disorientation that instead create excitement and curiosity. Drawing upon the experiences of reading a book, wandering a city, and visiting a used bookstore, this thesis project will include architectural elements that initiate both physical and cognitive forms of disorientation. Physical in that the architecture may be unpredictable or contain hidden surprises, and cognitive in that the library itself becomes a whole other world one can get absorbed into.

These types of disorientation promote discovery and curiosity, drawing people into the library and creating unintentional interactions between the public and the information, ultimately furthering the library's goal of becoming a conduit for knowledge.

Endnotes

- [1] Rebecca Solnit, *A Field Guide to Getting Lost*, (New York: Penguin Press, 2005) 6.
- [2] Victor Nell, *Lost in a Book: The psychology of reading for pleasure*, (New Haven: Yale University Press, 1988) 2.
- [3] Victor Nell, *Lost in a Book: The psychology of reading for pleasure*, (New Haven: Yale University Press, 1988) 81.
- [4] Guy Debord, "Theory of the Dérive," in *Internationale Situationniste* #2, translated by Ken Knabb, 1958.
- [5] Guy Debord, "Theory of the Dérive," 1958.
- [6] Theodore Dalrymple, "Why second-hand bookshops are just my type," *The Telegraph*, December 3, 2012.

PART 2

A Library for Sudbury

The design of a new public library for Sudbury, ON serves as an example of how discovery can be encouraged in libraries, promoting the interaction between information and the public.

CHAPTER 6

The Greater Sudbury Public Library System

The first library in Sudbury opened in 1912, three decades after the city was founded as a mining community. Its single room was a subscription library where its members paid a fee to access the building. The subscription-based service only lasted a few years, as it became free for all residents of Sudbury by 1917.¹ The library grew quickly, moving locations frequently as they ran out of space, occupying first the Huron Chambers, then the second floor of the Post Office (Elm St.), the CPR Telegraph building (Elgin St.), and the McLeod building (Cedar St.), before finding a more permanent home on Mackenzie St. in 1952.² Since then, the Mackenzie St. Library has undergone major renovations in 1998 and remains the central library for the Greater Sudbury Library System, which now includes thirteen branches (see Figure 31).

As the main location, the Mackenzie St. Library houses popular circulation collections and a children's collection, as well as the reference department, the genealogy and local history collections, and makerspaces. Although this location is the central hub for the Greater Sudbury Public Library (GSPL) system, it is severely undersized according to provincial standards. The Ontario Public Library Guidelines outline minimum requirements for libraries based on type and the population they serve. According to these guidelines, Sudbury's main library should be 70,000 sq. ft., with a minimum of 200 seats for library users, assuming a variety of seating types.³ Currently, the main library is a total of ~17,000 sq. ft. resulting in a drastically undersized building that does not meet the needs of its population. Furthermore, the current main library, despite having special collections like genealogy and local history, does not possess many of the important characteristics of a central library that were discussed in Part 1, such as a large atrium, generous spaces, or an iconic image. GSPL has recognized this need for a new central library, and has undergone over 20 years of research and 7 feasibility studies which have revealed inadequacies of the current space relative to population, operational needs and services, including; inadequate parking spaces which limits use, poor building health, accessibility issues, poor children's area, no teen space, limited study spaces, limited program spaces, and a minimum investment of \$1.1 million in repairs over the next 10 years if they were to stay in the existing building on Mackenzie St.⁴

The Greater Sudbury Public Library system, as a whole, serves a population base of approximately 161,000 people, with 60% of the population as active cardholders.⁵ As a place for accessing information, both the central library and its branches serve a diverse group of people and are open to all age groups, income brackets, ethnicities, and abilities.



Figure 29: The current downtown public library on Mackenzie St. nine years after it was built. Since then, the building has been added to and renovated, most recently in 1998.



Figure 30: An interior view of the downtown public library, showing the main workspaces and physical collections.

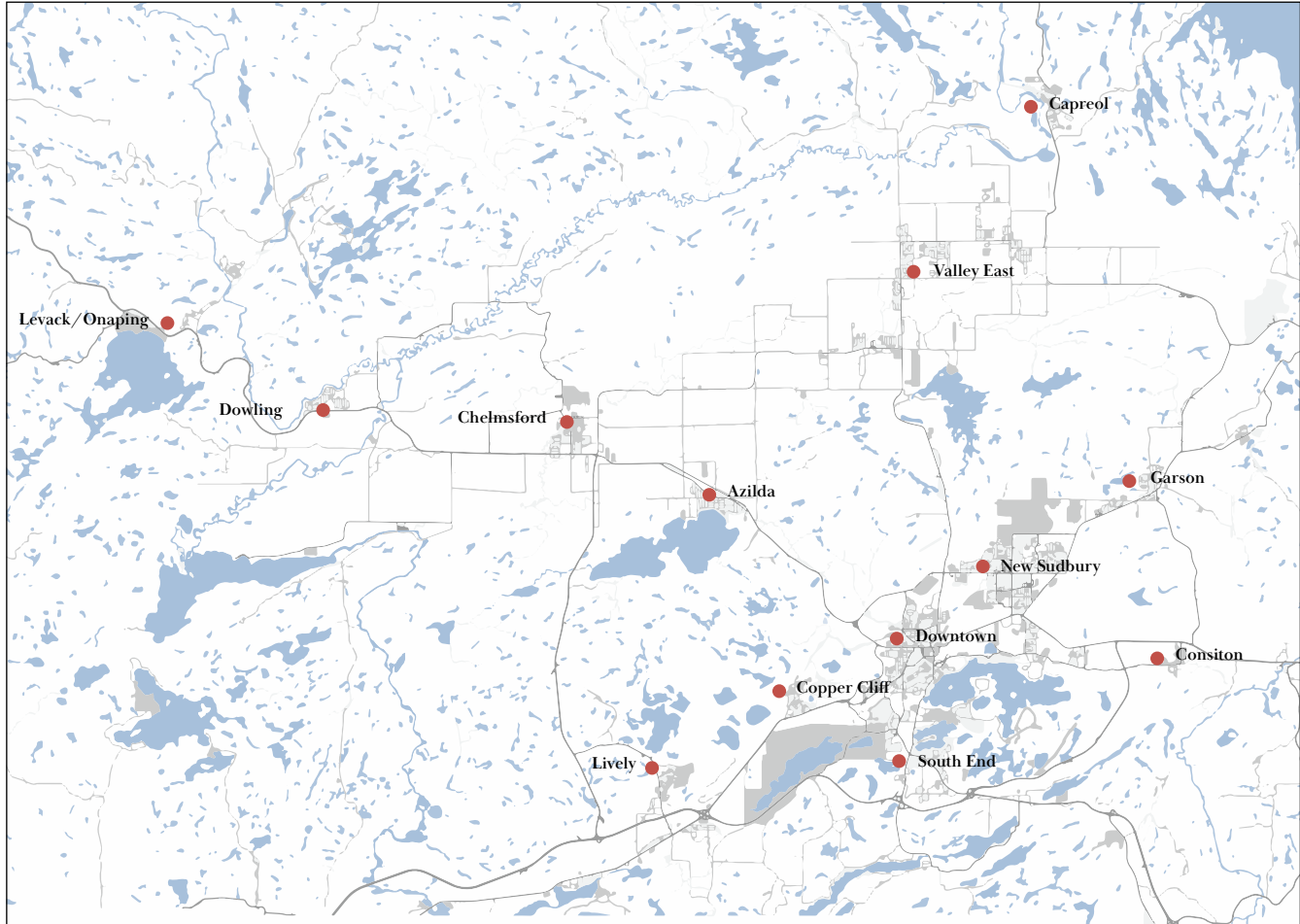


Figure 31: Greater Sudbury Public Library Branch Locations

The Greater Sudbury Public Library system (GSPL) is made up of one main library and 13 branches. Sudbury opened its first branch in New Sudbury in 1966, followed by a Copper Cliff branch in 1973 and a South End branch in the early 1980's.⁶ When Sudbury amalgamated in 2000, the library system grew from four to thirteen locations. Each branch varies in size, collections, and programs offered, ranging from 3,000-10,000 sf.

Endnotes

[1] Greater Sudbury Public Library, “History of GSPL,” www.sudburylibraries.ca

[2] Ibid.

[3] Ontario Public Library Guidelines Monitoring and Accreditation Council (ed.), “Ontario Public Library Guidelines: For Municipal and County Public Libraries,” 7th Edition, 2018. www.ontariopubliclibraryguidelines.ca

Assuming a catchment area population of 70,000, the library is categorized as an urban library which recommends a library size of 1 sq. ft. per person, giving a recommended square footage of 70,000 sq. ft. The guidelines also recommend a minimum of 200 seats for urban libraries, which include reading chairs, computer seating, and a variety of workstations.

[4] Michael Bellmore, “New Main Library Proposal,” presented to the City of Greater Sudbury, 2014.

[5] Canada, Ontario, Ministry of Tourism, Culture and Sport, “Key Ratios for population group 100,001-250,000,” in *Ontario Public Library Statistics 2017*.

[6] Greater Sudbury Public Library, “History of GSPL,” www.sudburylibraries.ca

CHAPTER 7

Site Analysis

AREA: 5,900 m² (63,485 ft²)

ZONE: C6 (Downtown Commercial)

SETBACKS: 15m setback from tracks

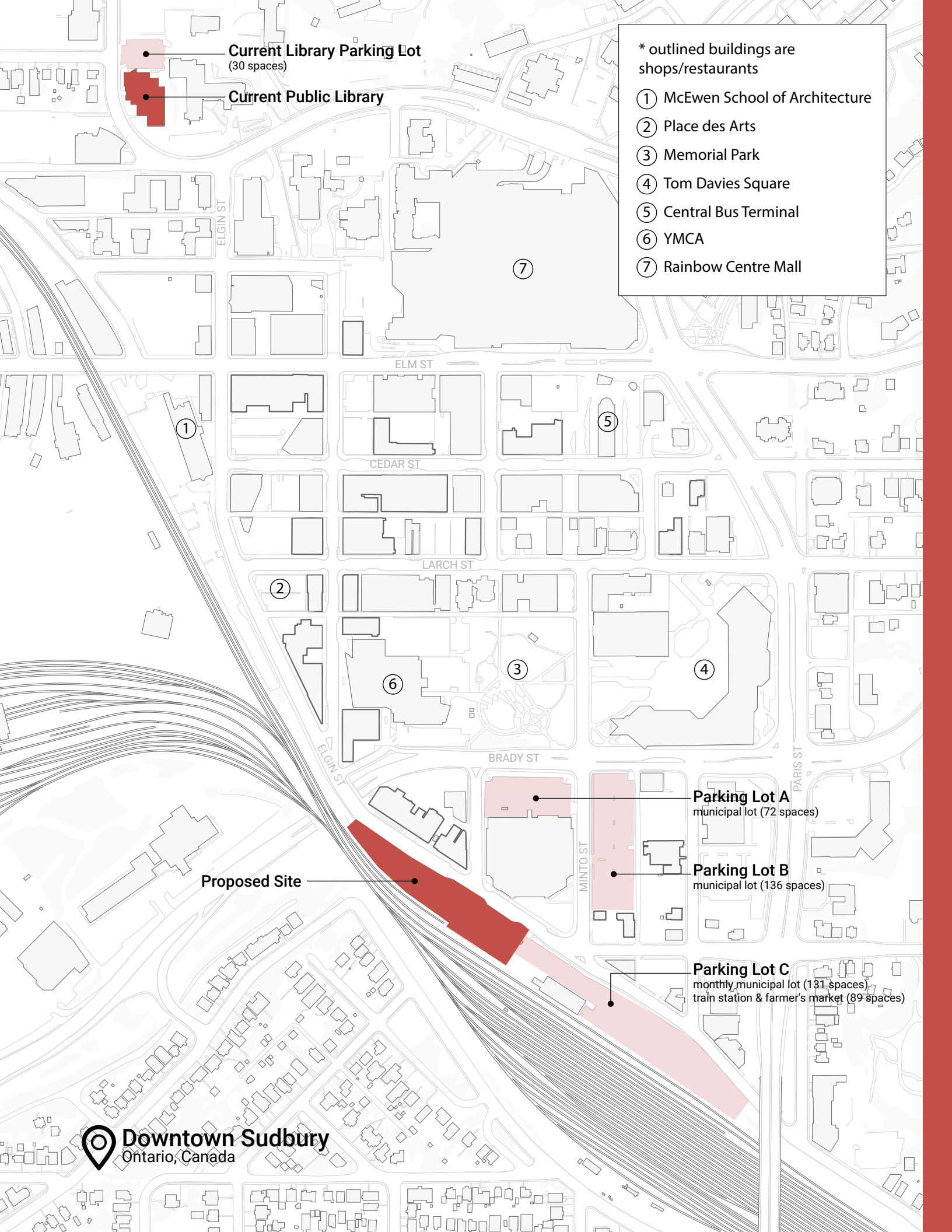
It is imperative that the new central library be located downtown for its central location, proximity to transit, and contribution to the downtown core. There are several sites in the downtown that could host the new library, however the site selected for this thesis investigation (255 Elgin Street) stood out for its visibility and connectivity—two important features of a public library.

The building needs to be in a highly visible location in order to help visitors find the building and to establish the library as a prominent place in the city. 255 Elgin St is an open site that is easily viewed from downtown, the Bridge of Nations, and the residential area to the southwest, making it an ideal location for creating an icon for the city. The site is at the intersection of the proposed Elgin Greenway, and the pedestrian tunnel that crosses under the tracks, providing exciting opportunities for cyclist and pedestrian travel as well as incorporating green-space. These corridors connect the downtown to other areas of the city, increasing accessibility to the site. The site has lots of nearby surface parking that was previously used for the arena, and can also accommodate a parking structure if needed, providing easy access for visitors traveling from further away, or locals traveling by car.

Currently a parking lot, this narrow and long site fits in-between the rail line and Elgin St. Across the street is a block of businesses, including the ever-popular *Laughing Buddha*. Due to the proximity of the rail lines, there is a 15m setback from the tracks. Its narrow shape and additional setback requirements make the site more challenging to build on, however since the property is zoned C6 (Downtown Commercial) there are no other restrictions for the building or site.

Figure 32: Site Overview >

The proposed site is 255 Elgin Street, Sudbury, ON. This diagram shows the location of the site within the downtown, highlighting the existing library location and proposed parking areas.



Current Library Parking Lot
(30 spaces)

Current Public Library

* outlined buildings are
shops/restaurants

- ① McEwen School of Architecture
- ② Place des Arts
- ③ Memorial Park
- ④ Tom Davies Square
- ⑤ Central Bus Terminal
- ⑥ YMCA
- ⑦ Rainbow Centre Mall

Proposed Site

Parking Lot A
municipal lot (72 spaces)

Parking Lot B
municipal lot (136 spaces)

Parking Lot C
monthly municipal lot (131 spaces)
train station & farmer's market (89 spaces)

Current Uses

The site is currently a parking lot, with a capacity of 150 parking spaces. These spaces serve the local businesses across the street, the Arena, and the Farmer's Market. With the closure of the Arena, less spaces are required in the vicinity, however this lot is still popular on non-game days. There are other nearby parking lots on Minto St and further down Elgin St that are not usually at capacity and can accommodate a greater number of vehicles, however the new library will require additional parking for its own use. The site is adjacent to the Farmer's Market which operates on Thursday and Saturday mornings, and may be affected by the use of this site, however this location for the Farmer's Market was meant to be temporary, according to the City of Greater Sudbury. The farmer's market could also provide potential opportunities for incorporation into the new central library design.

Access to the Site

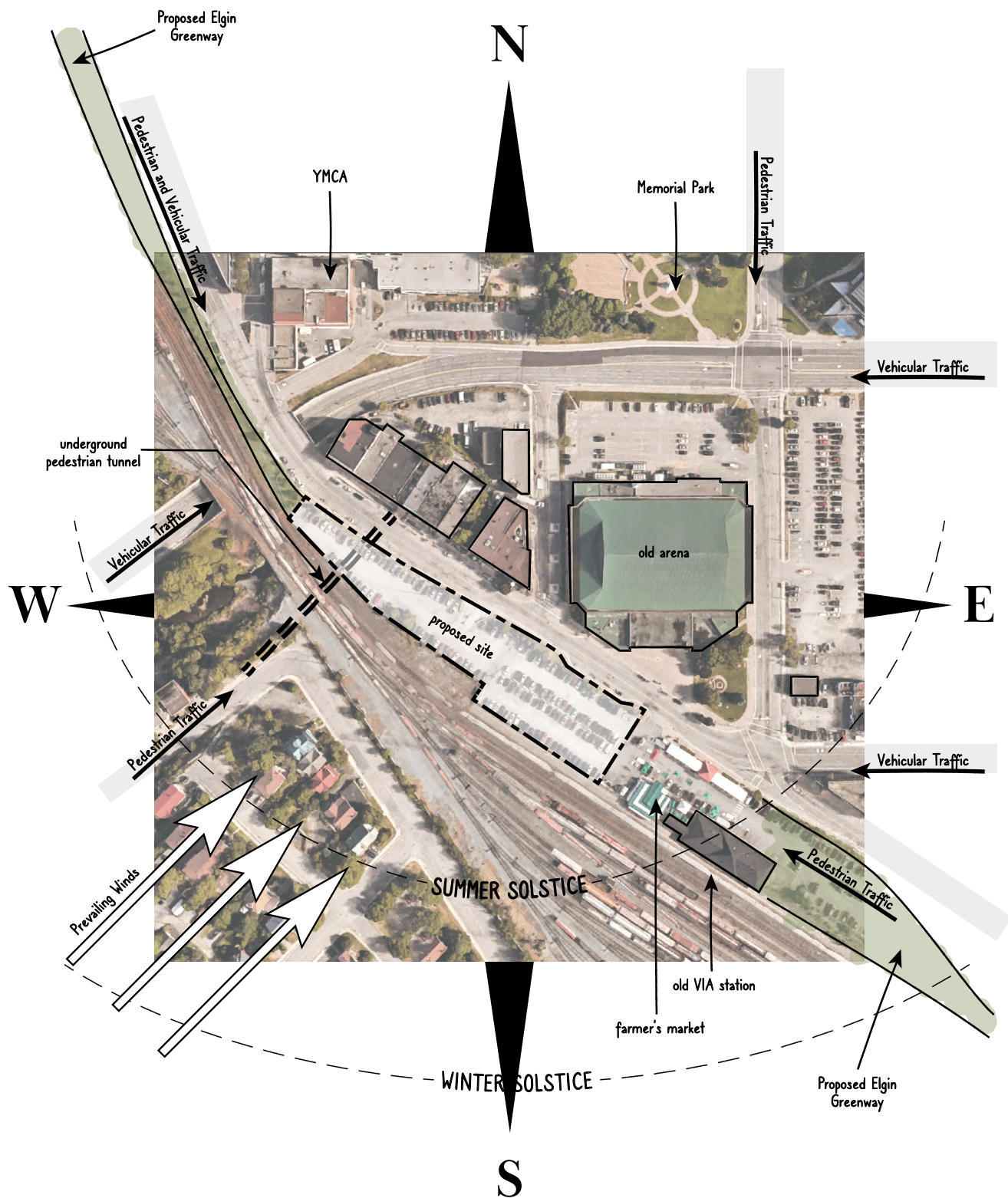
The site is in a central location in the city, and has multiple access points for vehicles and pedestrians. Walking or biking traffic can enter the site from the proposed Elgin Greenway on the North or East side, from the pedestrian tunnel that links downtown and Riverside Drive, and from the bus terminal to the North, via either Elgin St or Minto St. There are four bus lines that currently stop at the Arena across the street from the site: 101, 102, 501, and 181, and the main bus terminal is an 8 min. walk away. Major roads that would carry the most traffic in the area are Brady St (from the east and west), Paris St (from the north and south) and Elm St (from the east and west), all of which connect to Elgin St, carrying vehicles to the site. There are multiple parking lots in the area which were previously used for the Arena and can provide parking, and there is room to build a parking structure if needed.

Environmental Considerations

Since Sudbury is in a northern climate, the sun's path changes drastically from summer to winter, and should be considered when placing windows and shading devices. The wind direction in Sudbury is predominantly from the southeast, with some seasonal north-northeast winds. Given the exposed nature of the site, wind direction will also need to be considered, especially when designing outdoor spaces. For this site, the largest environmental consideration is noise and vibrations from the trains. The railyards adjacent to the site are very active and trains pass by frequently. The McEwen School of Architecture (just up the street) proves the trains are of minimal disturbance when properly designed for, and can become an interesting feature of the site.

Figure 33: Site Analysis Diagram >

A representation of the multiple factors that impact the positioning of the building on the site, including existing uses, sun and wind patterns, and directions of access,



CHAPTER 8

Library Program

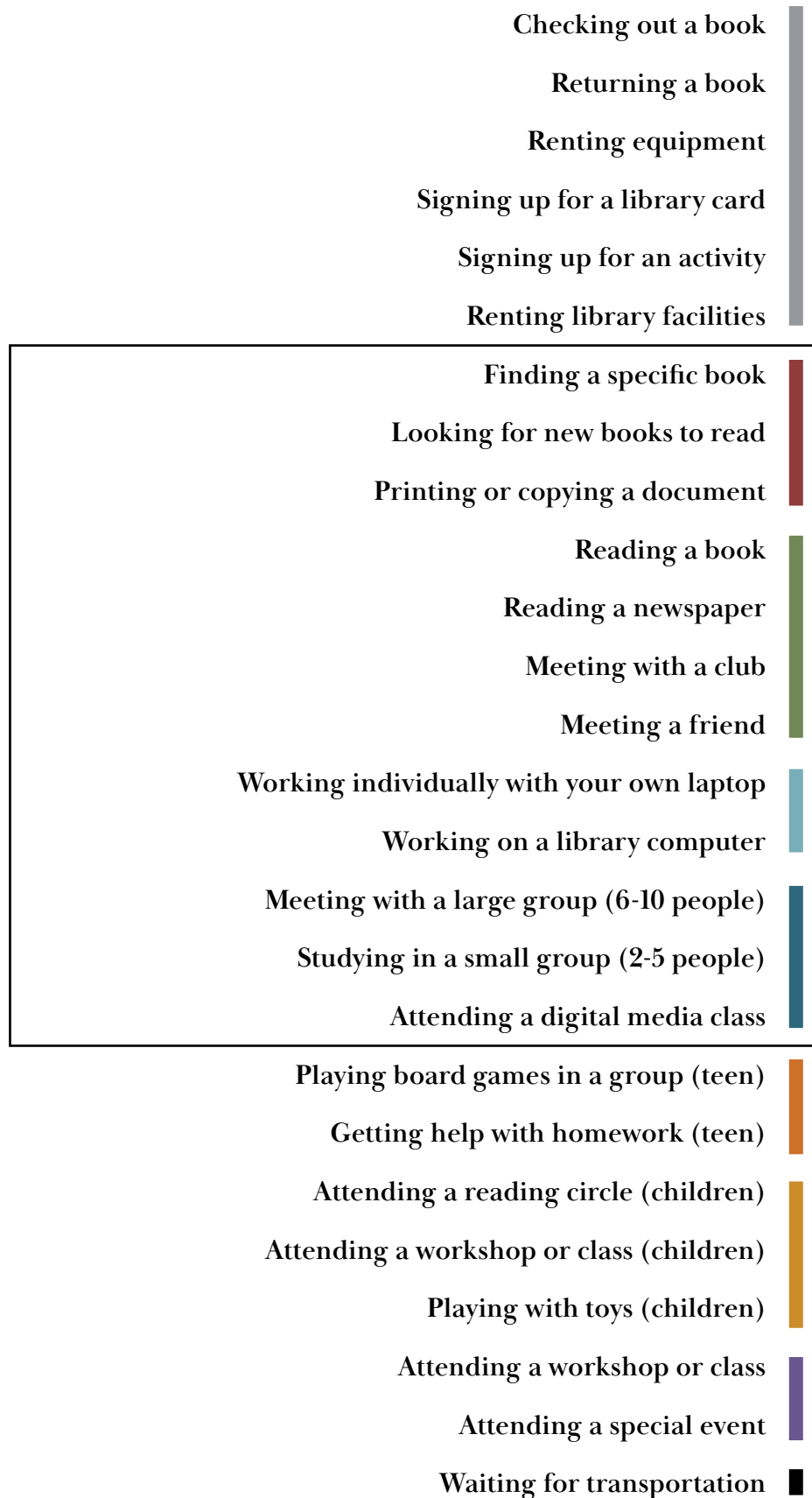
A feasibility study completed in 2015 by a local architecture firm *Yallowe-ga Bélanger Salach Architecture* in partnership with the Greater Sudbury Public Library Board, has outlined area and room requirements including estimated square footage which has provided a loose set of guidelines for the building. Rather than beginning with these guidelines, which focus on the physicality of the building and efficiency of space, I began by looking at the people who use the building, and what types of activities take place in a library. I compiled a list (see right page) which highlights common uses observed in my case studies of local libraries. These uses were then organized into similar categories used in the analysis of my case studies; back-of-house, physical collections, teen section, children section, reading room, open workspaces, study rooms, program rooms, and exterior/other.

To encourage exploration and discovery I wanted to take a decentralized approach as discussed in Chapter 3, where many of the different types of spaces were mixed together rather than isolated. I concluded that the back-of-house, children's section, teen section and at least one program room should remain separate due to their need for visual/acoustic privacy. It was also important that the teen section remain separate as a deliberate definition of space devoted to them specifically, which creates a sense of ownership and belonging. The remaining spaces (the collections, reading room, workspaces and study rooms) were then free to become a heterogeneous mix, inserting people directly into the collections and creating opportunity for unexpected interactions.

Due to the sighting of the building, and the close proximity to the current farmer's market location, I decided to incorporate a hub for the market inside the library — as observed in the Orillia Public Library. This hub is a flexible space with a few offices and a front desk. It can be used year-round for market planning and support services, and can be open during market hours for events or activities. I am also including a café in the library, as it has proven to be a popular and successful addition, and is becoming an integral piece of contemporary public libraries.

Figure 34: List of Potential Uses >

This list of activities that would typically take place in the library helps to determine the types of spaces necessary to facilitate the uses. The items listed were then grouped into sections with similar spatial requirements, and are colour-coded using the same categories from the case studies in Part I. The box represents activities that can be intermixed.



BACK OF HOUSE

main circulation desk, book sorting, offices, delivery entrance, storage, janitorial, staff room, meeting room, staff washrooms, garbage room.

Considerations: natural light and exterior views for offices, noise control, back entrance, supervision of public spaces,

TEEN SECTION

teen collection, group seating, individual seating, computers, board games, video games,

Considerations: noise control, inclusion, belonging, ownership, supervision, plug outlets

FARMER'S MARKET

offices, front desk, multi-purpose space, storage room, staff washrooms, opens to outside

Considerations: high visibility, connectivity to exterior, ability to close off from library,

THE COLLECTIONS

fiction, non-fiction, reference, genealogy, and local history collections, periodicals, group tables, individual workspaces, computers, reading chairs

Considerations: noise control, supervision, wayfinding, plug outlets, lighting

STUDY ROOMS

small group rooms, large group rooms, computer lab,

Considerations: quiet, secluded, visibility to rest of library, plug outlets, proximity to reference collections

CHILDREN'S SECTION

children's collection, program room, family washroom, help desk, play area, child-friendly tablets, computers, seating, outdoor play area

Considerations: noise control, soft floors and surfaces, low shelving, supervision, inclusion, variety of seat sizes, variety of heights, easy to clean surfaces, stroller storage, plug outlets

CAFÉ

main serving counter, tables, bar seating, plug outlets, storage, separate public entrance, exterior patio

Considerations: connection to street, ability to close off from library, openness to library, plug outlets

PROGRAM ROOM

large multi-purpose space, storage room, tables and chairs, tech equipment for presentations,

Considerations: multiple doors, room divider, natural light, close to main entrance, plug outlets

READING ROOM

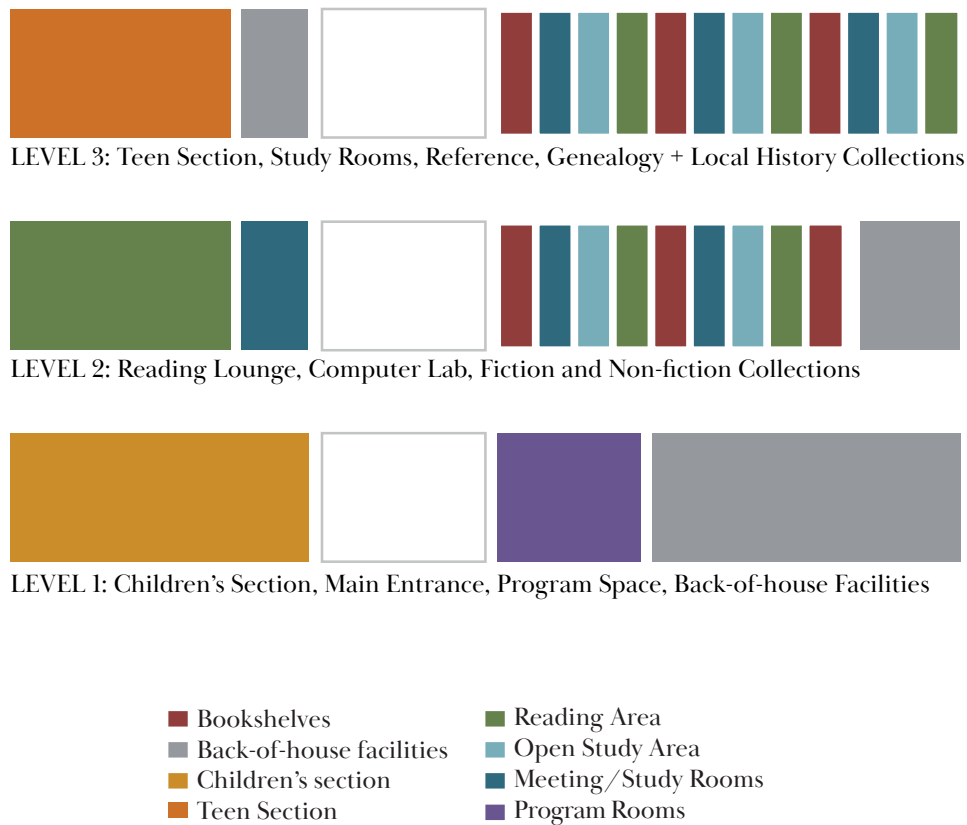
periodical collection, fireplace, chairs, tables,

Considerations: quiet, cosy atmosphere, secluded, grandness, views to outside, close proximity to fiction collection, plug outlets

ATRIUM

vestibule, main entrance, front desk, seating area, main stairwell, washrooms,

Considerations: grandness, generosity of space, sightlines, air circulation, natural light, connections to spaces



^ *Figure 35. Spatial Configuration Diagram*

This diagram shows the preliminary organization of spaces by floor, based on the information gathered from the local case studies in chapter 4. A large portion of space was given to create a main atrium in the centre, which connects the floors and brings light into the centre of the building.

< *Figure 36. Basic Program Requirements and Considerations*

By identifying requirements and considerations for each program type, the space can then be designed to accommodate and enhance both the activities that take place, and the users of the space.

CHAPTER 9

A Design Proposal

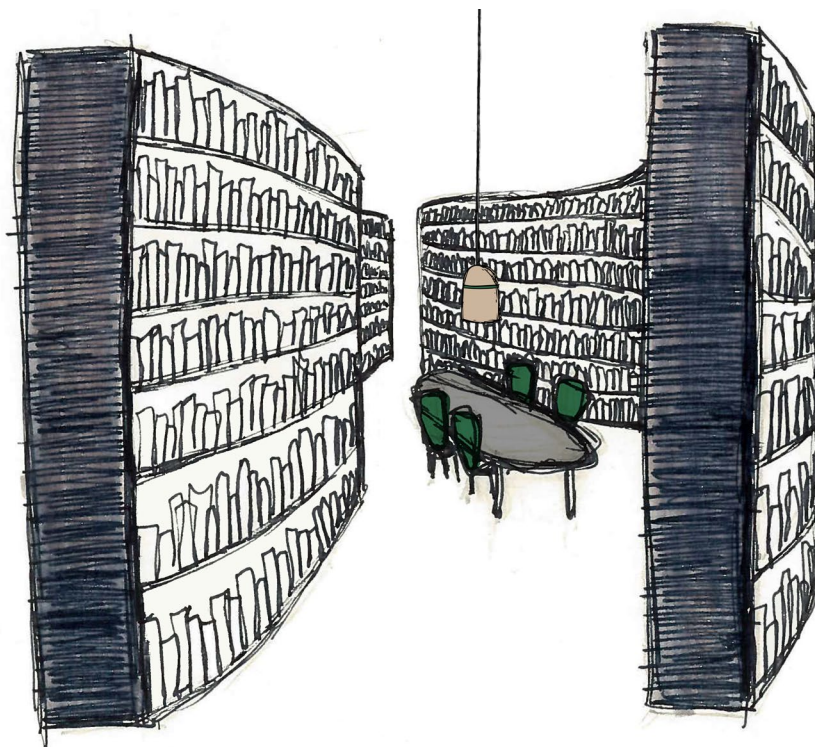
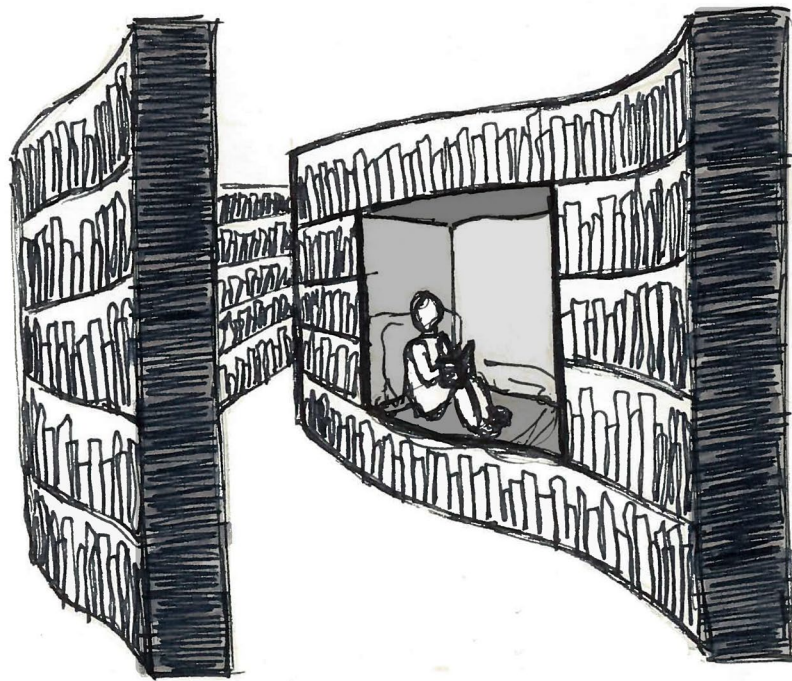
The aim of this project is to propose a new example of how libraries can be designed to encourage interaction between knowledge and the public. Rather than extreme delineation of spaces—a contemporary trend that prioritizes specific search queries and is best represented in the Seattle Public Library—I wanted to explore the balance between clarity of organization and serendipity. Without losing the ability to easily find a specific book, the goal of this building is to encourage people to wander the stacks, exploring areas of the building they may not otherwise visit.

To create an allure and a sense of intrigue, the standard rows of shelves were designed in a curved manner so that the path becomes an interesting way of finding and encourages the participant to explore the stacks, interacting with the collections. This wavy design allows for a labyrinthine space without compromising organization and ease of finding specific books, and it also makes it easy to integrate workspaces, seating and computers into the stacks, bringing people closer to the books. Overlapping these other spaces with the collections creates opportunity for unintended interactions, connecting people to collections they may not otherwise visit.

The serendipitous quality of the collections is accentuated through the exterior form of the library, as the thick, planar walls initially hide the wavy forms, only becoming revealed once you enter the building. The massive walls also create a barrier between exterior and interior, so the library becomes a whole other world that you can become absorbed in—much like a book. The walls undulate to let natural light in and to provide views, which open up as you get closer to the outside walls.

Figure 37. Sketches of the Stacks >

These sketches illustrate the experience of wandering through the stacks, and show both the reading nooks and workspaces that are incorporated, which encourage discovery through overlapping program elements.



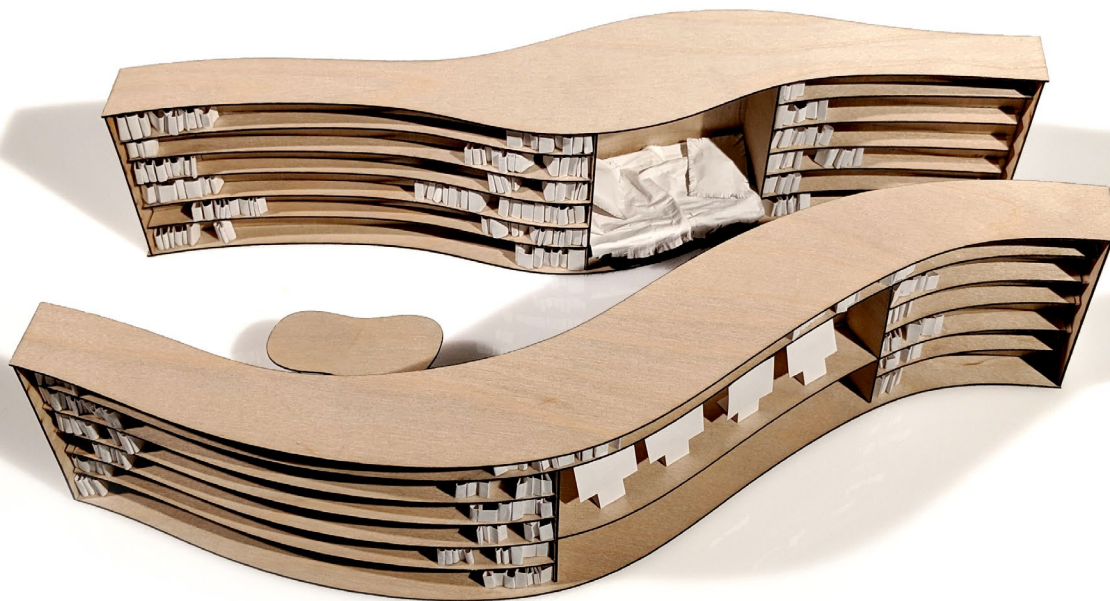
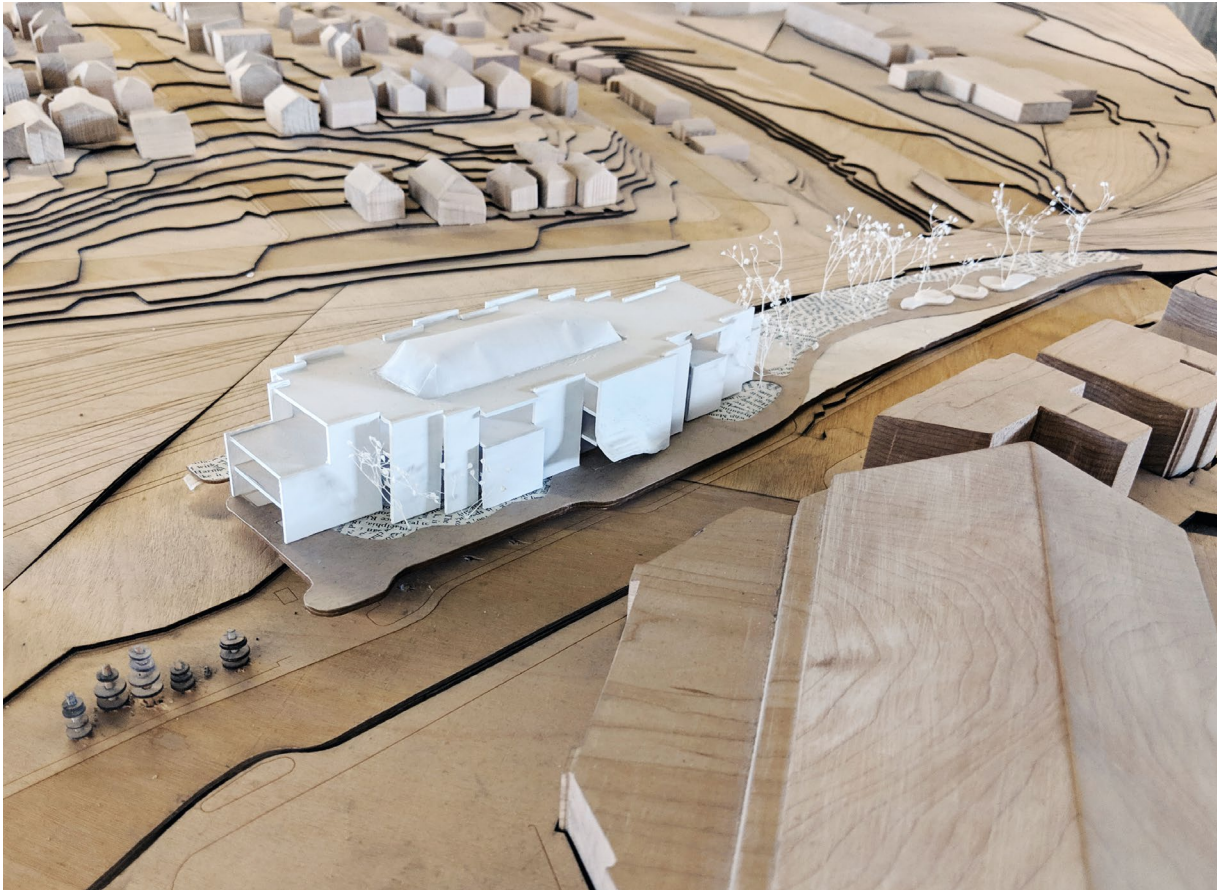


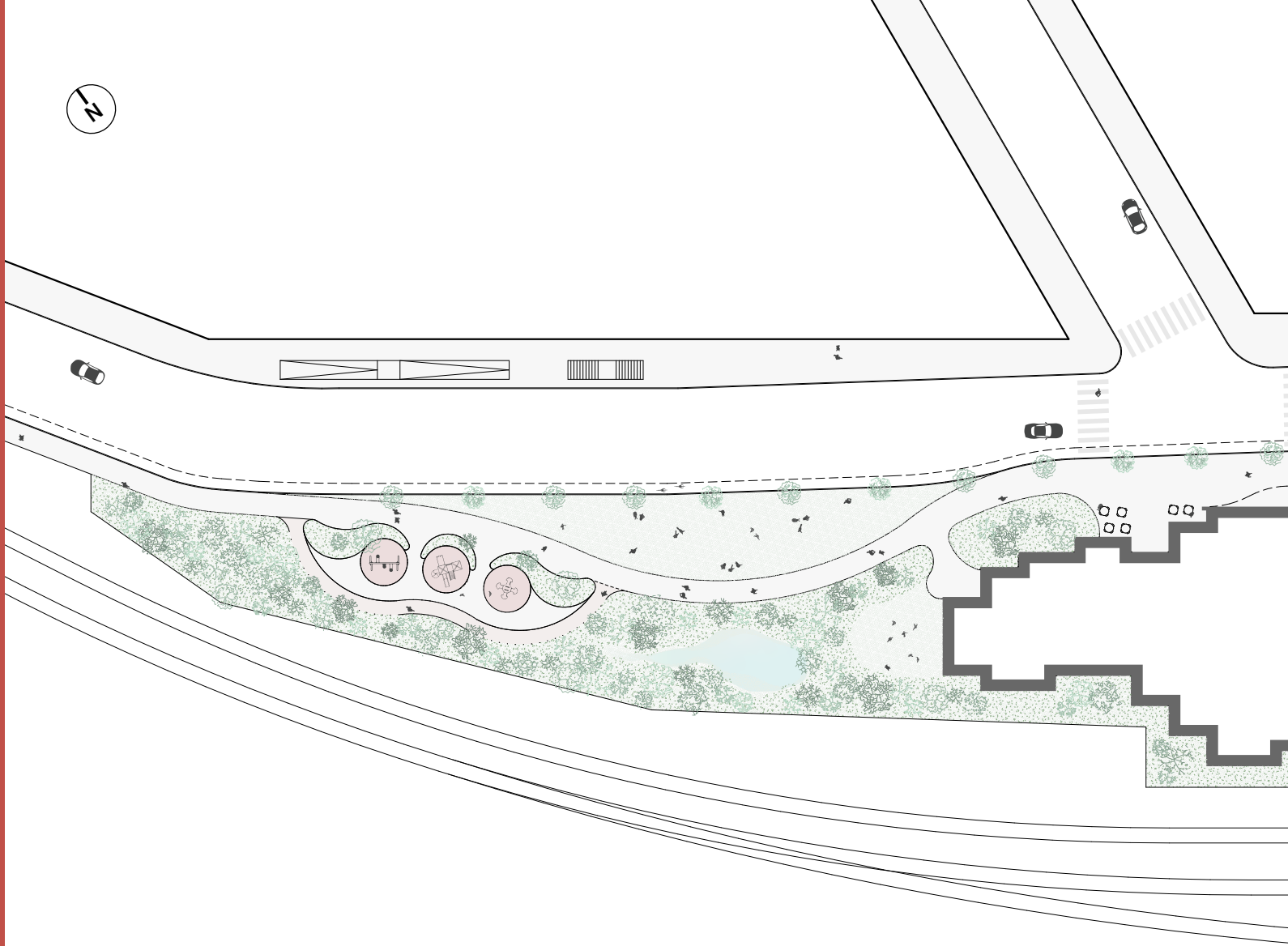
Figure 38. Model of the stacks ^

This model shows the integration of computer stations, reading nooks and worktables into the bookshelves, connecting different uses of the library.

Figure 39. Site Model >

This model illustrates the library within its context, showing the relationship between the proposed project and the surrounding buildings. This location allows the building to be highly visible from the Bridge of Nations (a major vehicular thoroughfare) and from the nearby neighbourhoods.

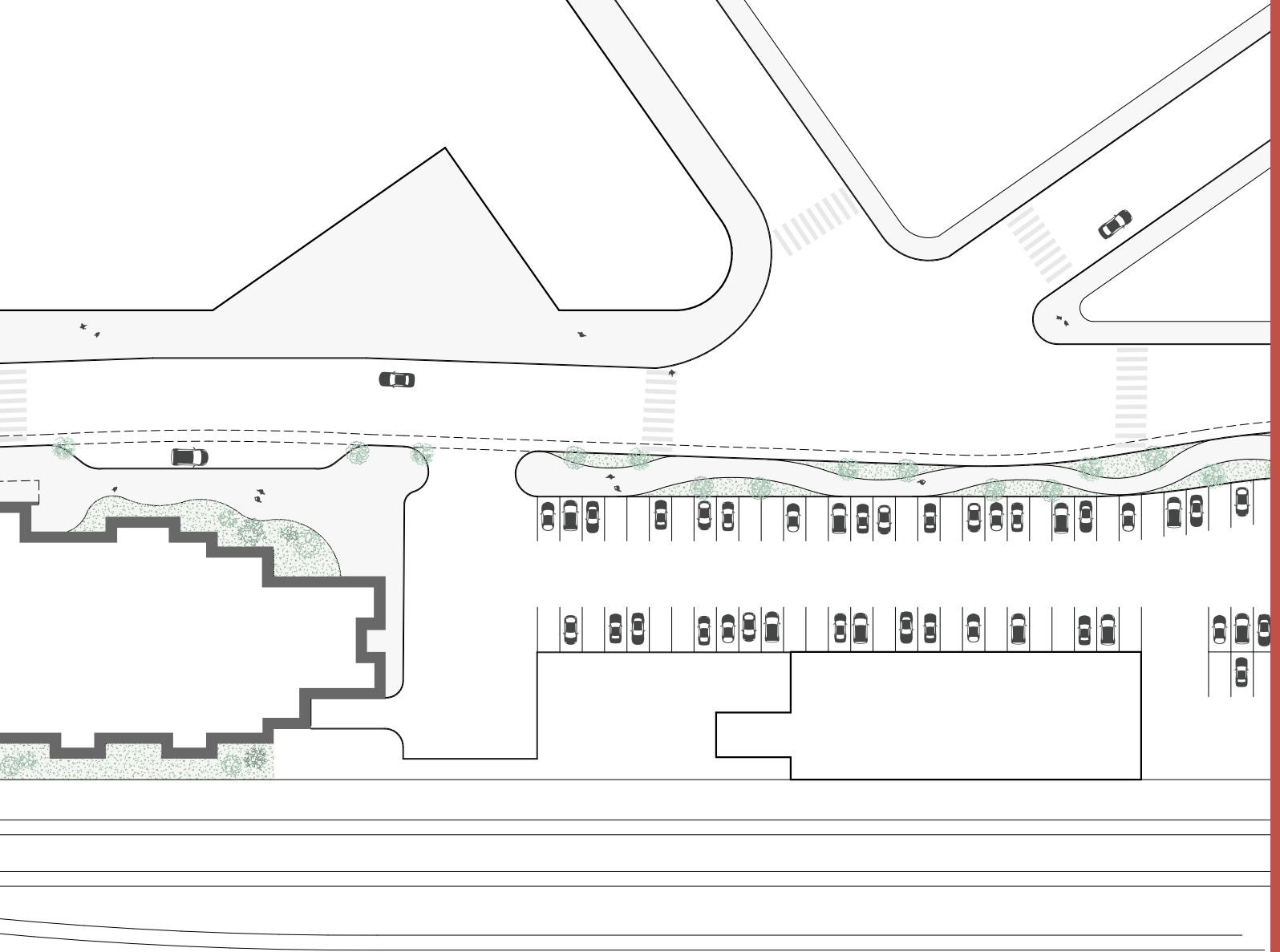




^ *Figure 40. Site Plan. 1:800.*

The site offers ample green-space as part of the Elgin Greenway Project, which is proposed by the City of Greater Sudbury. This outdoor area houses a small park, an outdoor activity space directly adjacent to the children's section, a grassy area with picnic tables, and a naturally landscaped buffer between the tracks and the habitable areas.

This landscape buffer is planted with native tree species such as birch, maple and pine trees, as well as native grasses and it includes a small pond/wetland area that collects excess water runoff from the site. Located on the southern side of the site, it filters noise and creates a barrier from the tracks, and also blocks the prevailing winds that come from the south-west.



It is this green-space that connects the building to the urban fabric, and can become a venue for events, festivals, and outdoor activities. The mixture of different types of landscaped areas creates a vibrant streetscape and is conducive to a wider range of activities, inviting different types of people to use the space.

The east end of the site remains a parking lot for the train station, which is also home to the local farmer's market in the summer months. This parking can also be used for the library, with additional lots to the north and east of the site. (see Figure 32).

Figure 41. Exterior View, Facing South-West
View of the proposed library approaching from Elgin St.







Figure 42. Lobby and Atrium

The atrium acts as a social meeting place and main circulation thoroughfare, connecting the building both horizontally and vertically.

Upon entering, the lobby opens up into the atrium where the main circulation stair guides visitors vertically through the building. Because the atrium is so central, it also acts as a wayfinding element, orienting visitors and providing direct sightlines to their destination. From the lobby, the café, program rooms and children's section can also be easily accessed.

The children's section is directly off the main lobby, and also has its own entrance on the west side of the building. This second entrance provides access to the outdoor play area and the rest of the park, linking the library with the surrounding green-space. The children's library is organized into two sections to differentiate between toddlers and older children. Parents are still able to supervise their children in both these areas, while giving some autonomy to older kids who are still too young for the teen section.



Figure 43. Children's Section

The children's section includes the same curvy stacks as the rest of the library, housing the physical collections, computers and reading nooks.

The teen section was also given careful consideration, as this space is commonly overlooked in other contemporary public libraries. In this building, it is given a dignified location on the top floor, with west-facing views and an outdoor terrace overlooking the park (see figure 47). The space provides a variety of individual and group workspaces, computers, a private room for homework help, and a nearby information desk that is far enough away to maintain privacy while still providing some supervision.

In the following drawings (figures 44-49), the stacks are highlighted in red, demonstrating their dispersal throughout the library. The integration of workspaces, reading spaces, computers, etc. into the stacks allows them to become more than just a place to put the physical collections. The stacks encompass all of these different ways to learn, modernizing them to reflect the 21st century library. They are distributed throughout the library to ensure that every visitor will encounter the stacks, increasing opportunity for discovery.

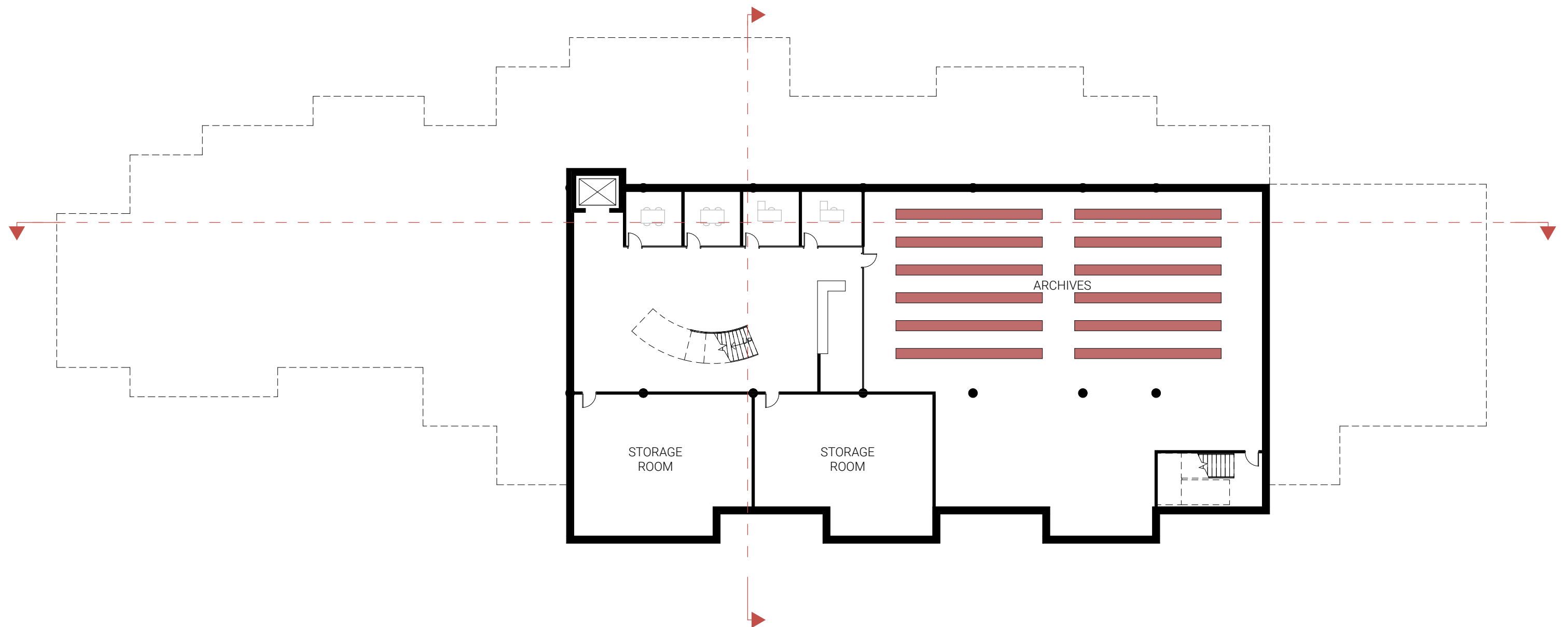


Figure 44. Basement Floor Plan. 1:200.

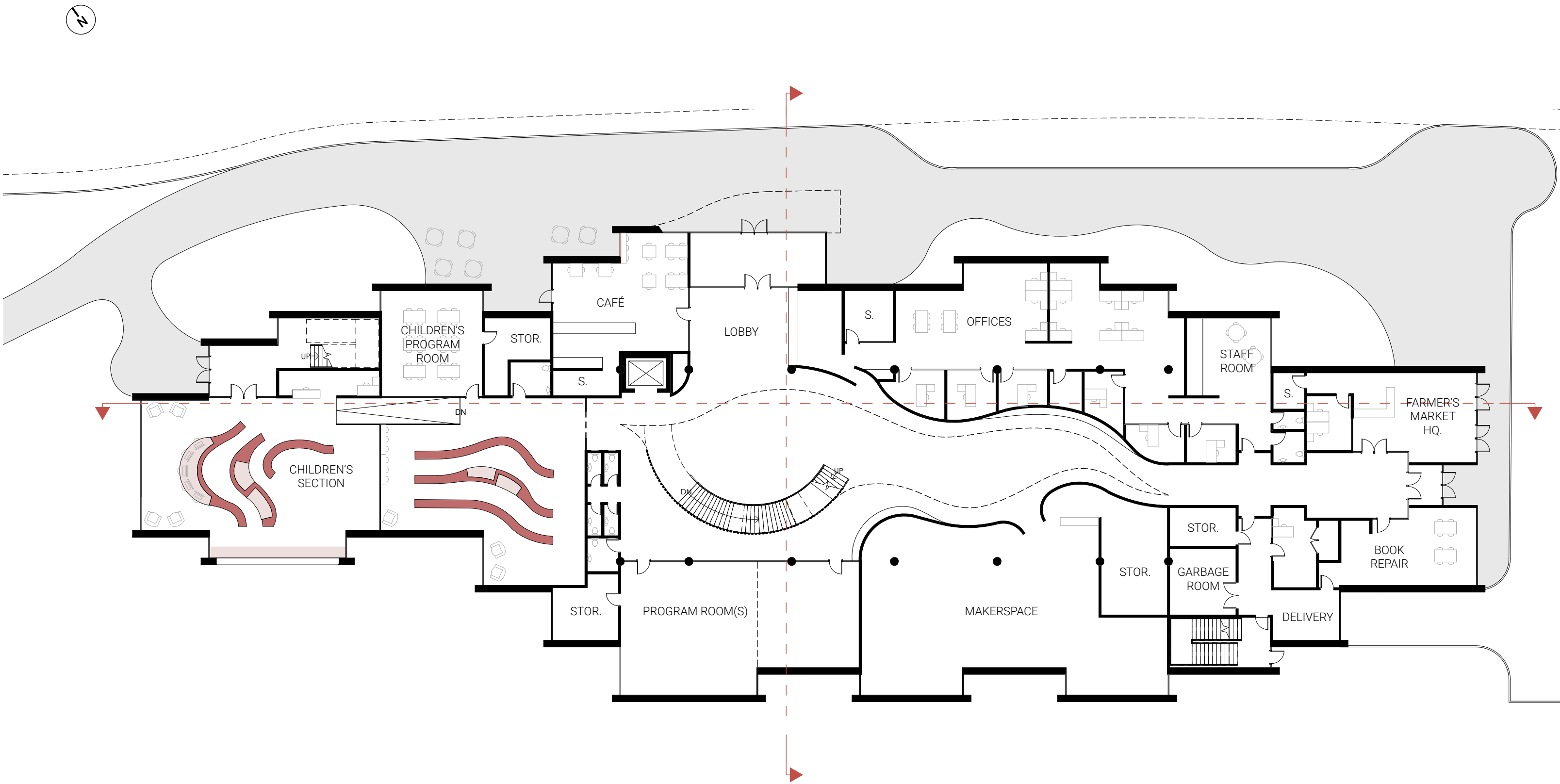


Figure 45. Ground Floor Plan. 1:200.

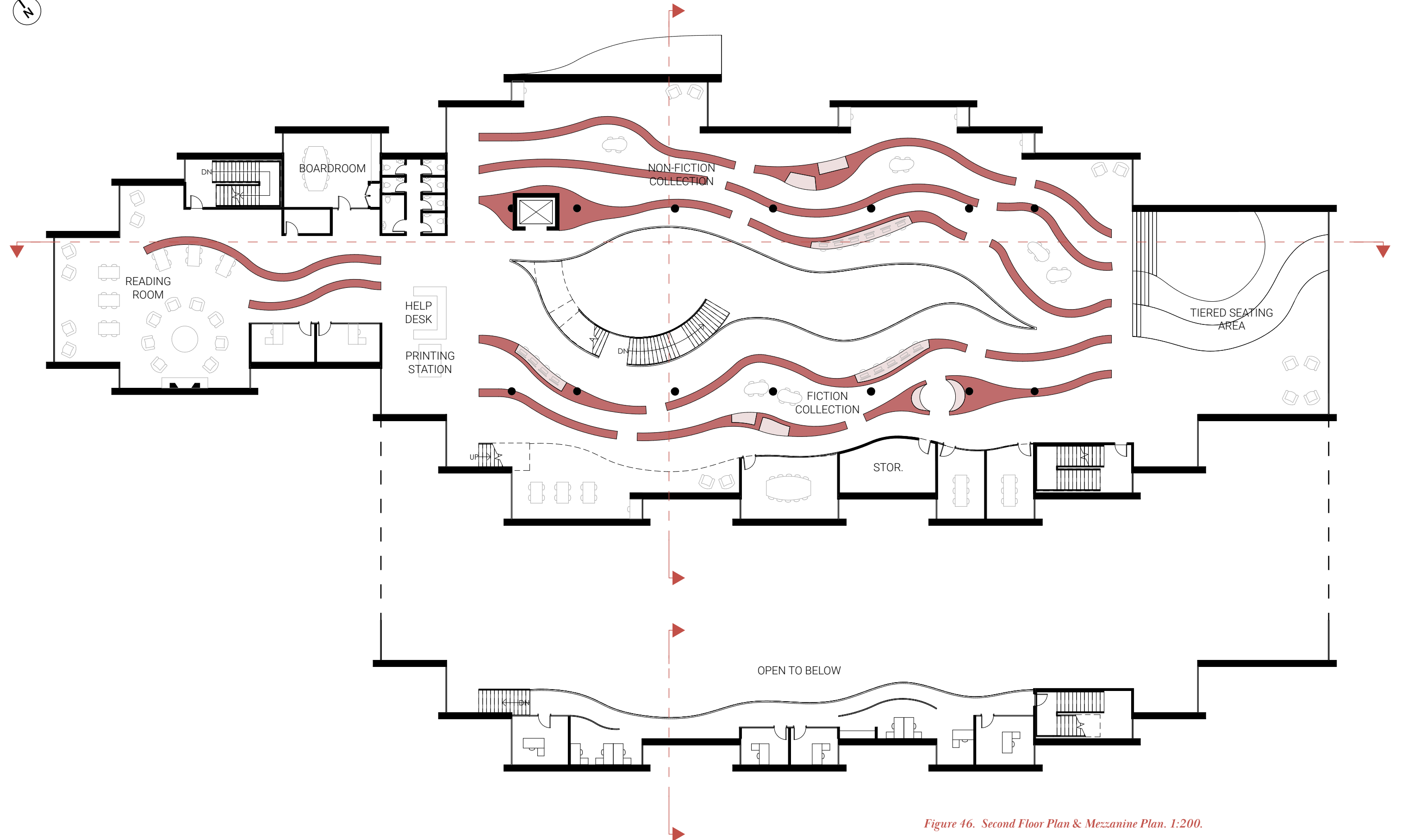


Figure 46. Second Floor Plan & Mezzanine Plan. 1:200.

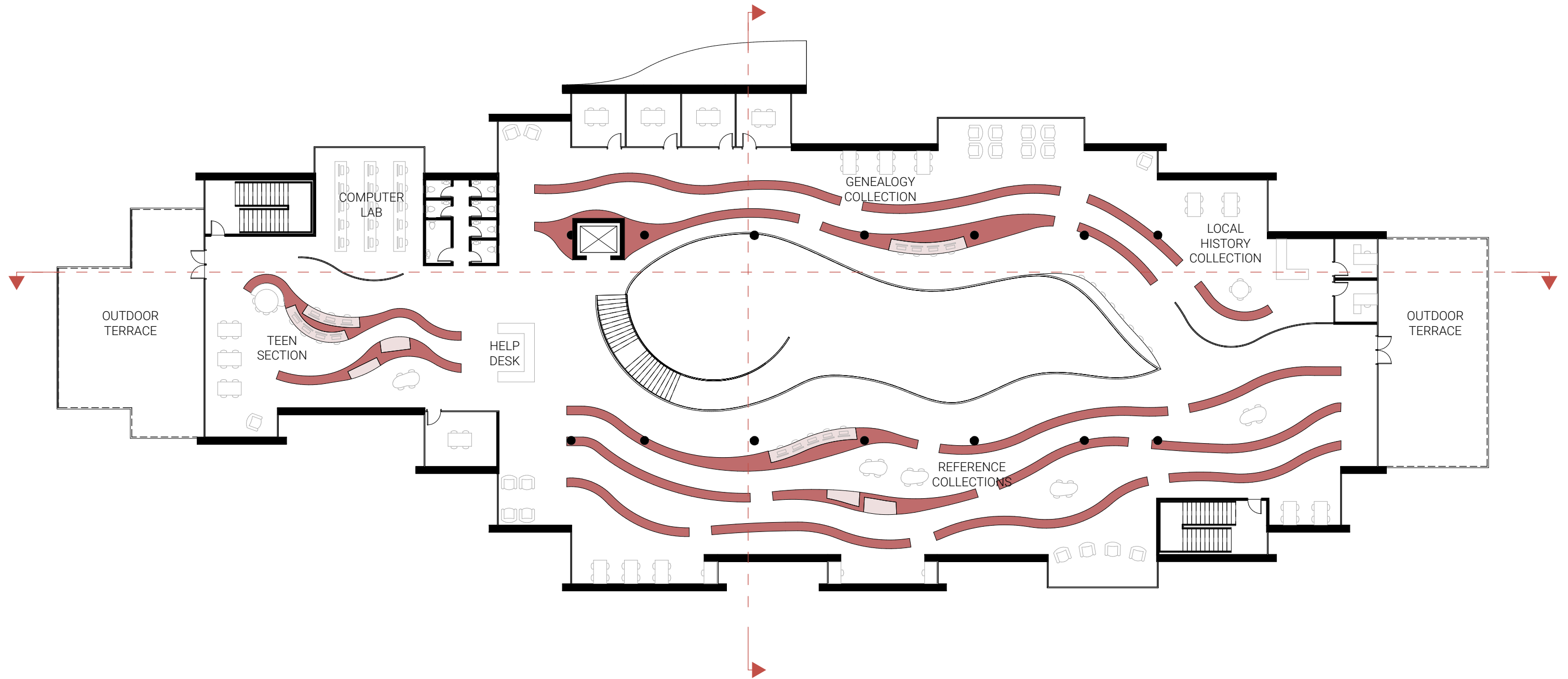


Figure 47. Third Floor Plan. 1:200.

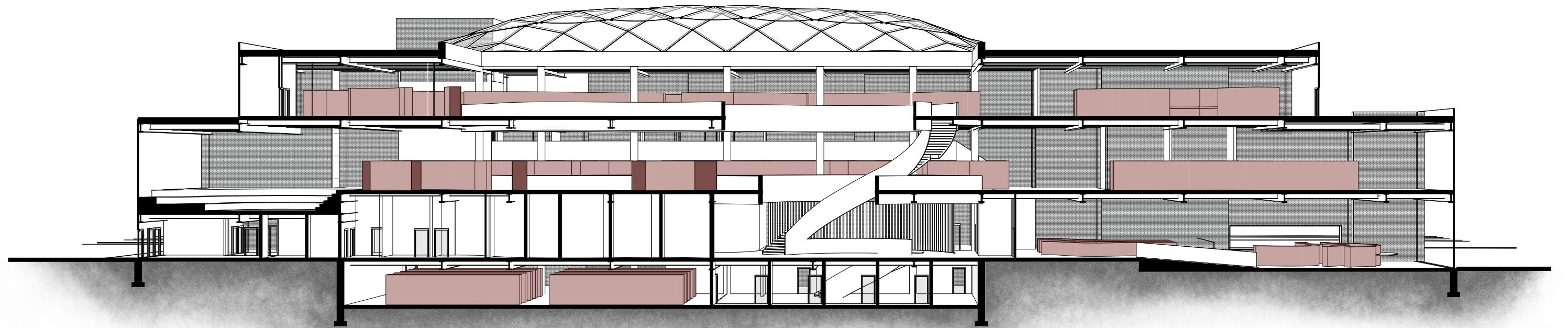


Figure 48. East-West Long Section. 1:300.

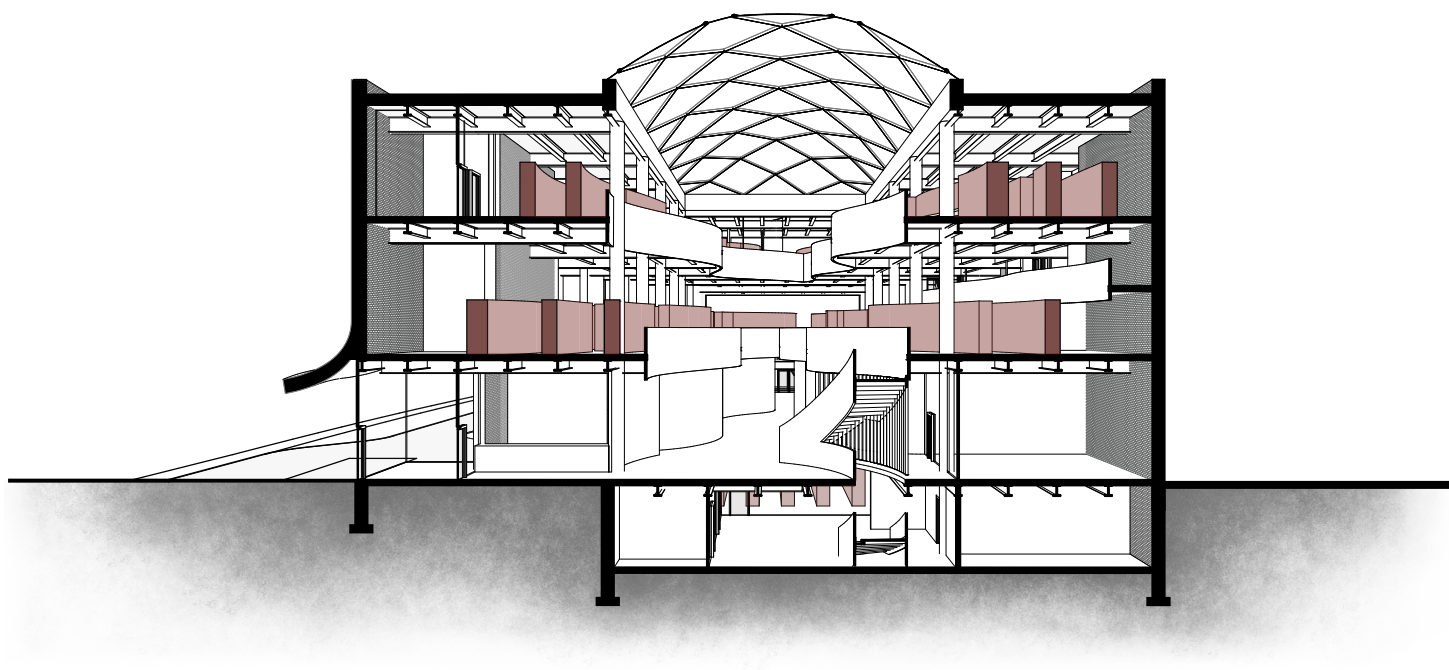
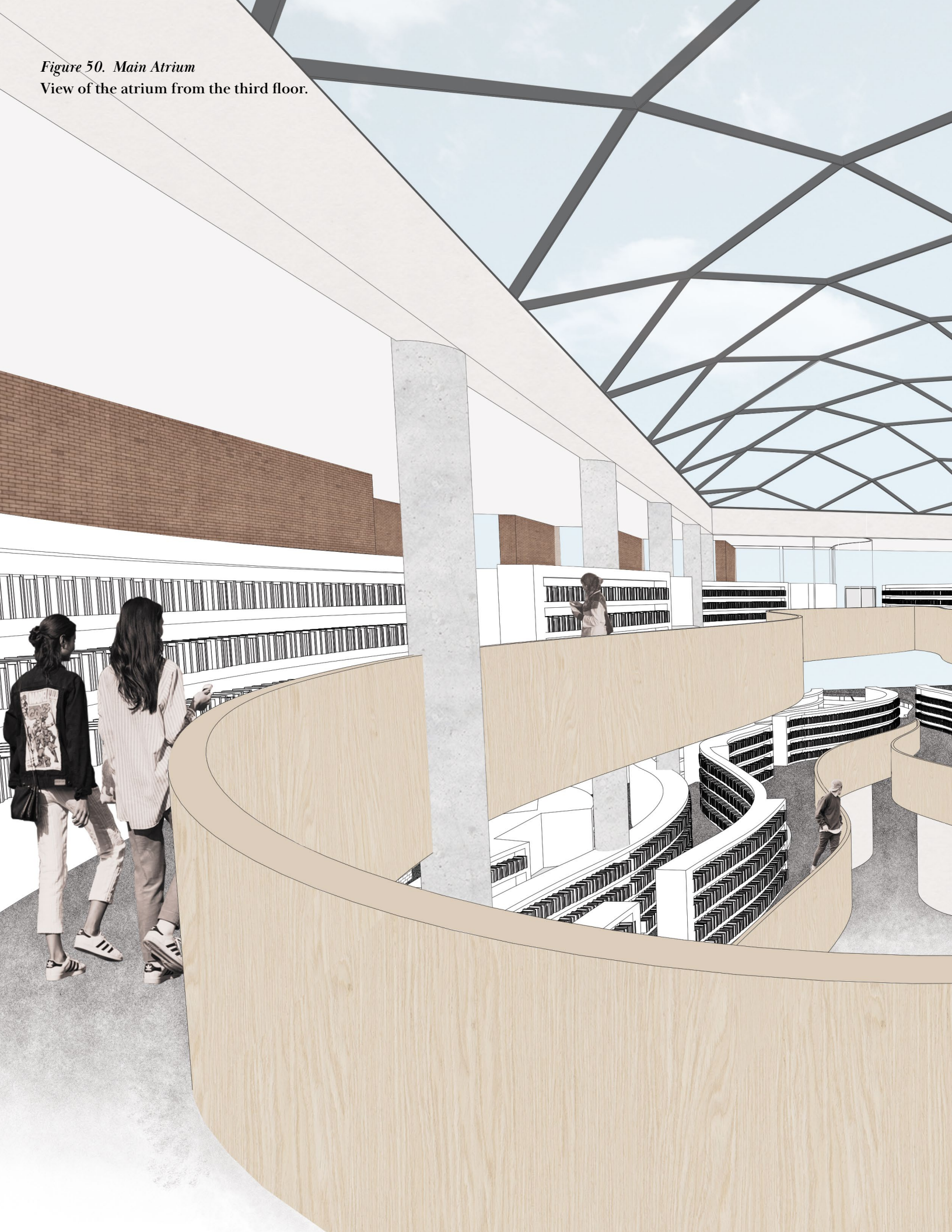
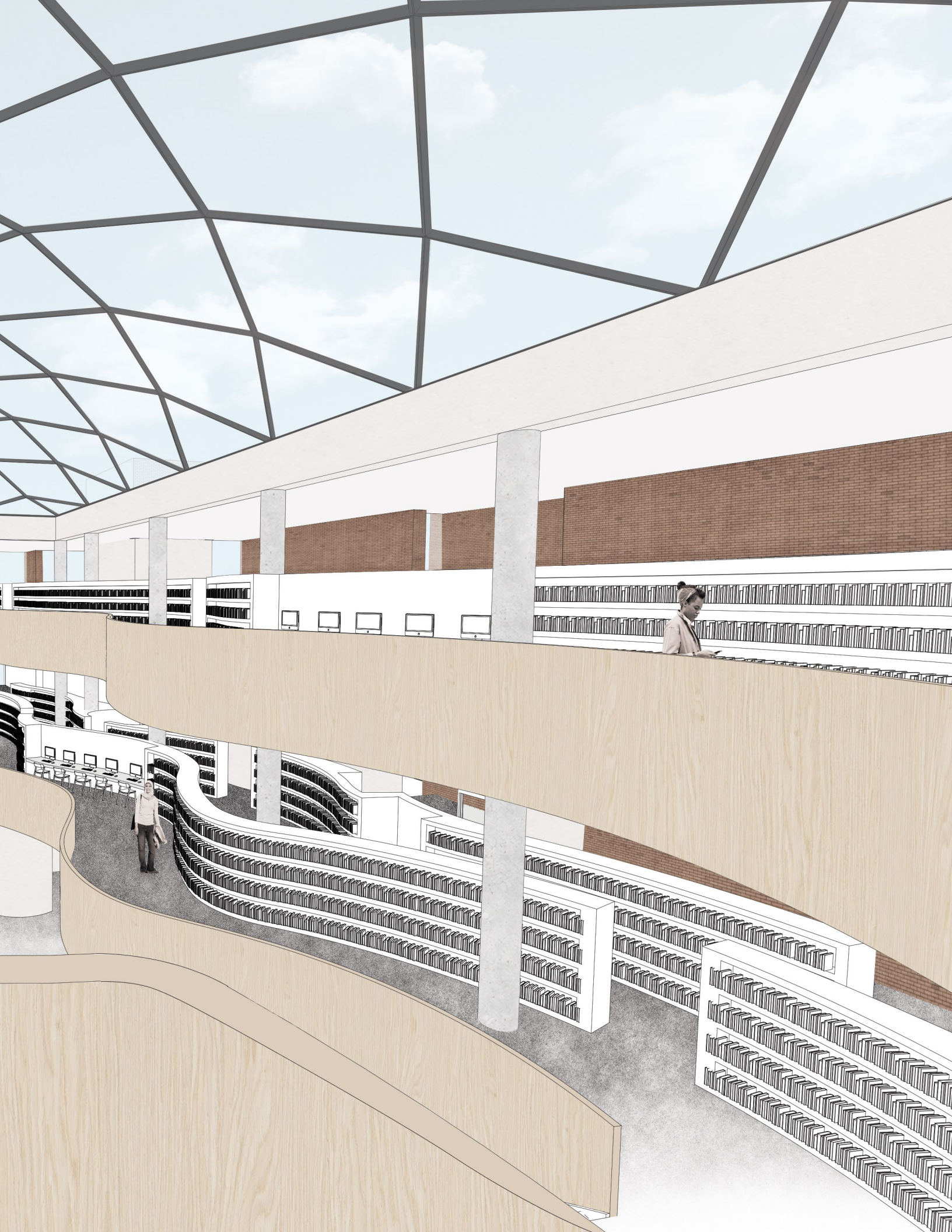


Figure 49. North-South Cross Section. 1:300.

Figure 50. Main Atrium
View of the atrium from the third floor.





CHAPTER 10

Conclusion

This thesis encourages discovery as a method of promoting interactions between the public and the information stored in the library. It recognizes that some knowledge cannot be found using a specific search query, but instead, is found through browsing and wandering. Serendipitous explorations should not be overlooked, as they can lead to great discoveries and possibly a new favourite book.

The design of a new public library for Sudbury, Ontario becomes an example of how these principles can manifest in the built environment. To promote serendipity, both physical and cognitive elements of disorientation were used, since disorientation can provide opportunity for discovery. The curving shape of the stacks makes them unpredictable, enticing visitors to explore, while the dispersal of different programming throughout the library brings visitors to areas they may not otherwise go, providing unexpected interactions. The building is also designed to feel like its own world that visitors can become absorbed in. This is achieved through the contrast between the exterior and interior forms of the building, the staggered walls that limit views to the outside from the middle of the library, and the design of the task lighting that creates individual bubbles of light, darkening the appearance of the rest of the library.

The process of browsing, wandering and discovering is an integral piece of the library experience, and is a necessary part of providing access to information. As digital collections become increasingly popular, the importance of serendipity cannot be overlooked. While there are companies looking at serendipitous exploration in the digital realm,¹ the physical space of the contemporary public library is thriving (as discussed in chapter 2), and is equally deserving of attention.

Endnotes

[1] Jessie Ransom, "Library Exploration through Serendipitous Discovery," *Ex Libris*, September 22, 2016. www.exlibrisgroup.com/library-exploration-through-serendipitous-discovery/

Bibliography

- “Ontario Hubs: Our Changing Libraries,” *The Agenda with Steve Paikin*. Aired October 20, 2017 on TVO.
- A.G.B. “Facilities & Design: Metro Toronto Library: Design Concepts to “Complete in Your Mind”.” *American Libraries* 8, no. 8 (1977): 426-28.
- Baldwin, Ian. “Big Glass: The public library’s evolving typology.” *Architecture Boston*. (2014): 35-37.
- Beckman, Margaret, Moshie Dahms, and Lorne Bruce. “Libraries.” *The Canadian Encyclopedia*. 2006.
- Bellmore, Michael. “New Main Library Proposal.” presented to the City of Greater Sudbury, 2014.
- Bennett, Hannah. “The Psyche of the Library: Physical Space and the Research Paradigm.” *Art Documentation: Journal of the Art Libraries of North America* 32. (2013).
- Bobinski, George S. “Carnegie Libraries: their history and impact on american public library development.” *ALA Bulletin* 62, No. 11. (December 1968). 1361-1367.
- Campbell, James. *The Library: A World History*. Chicago: Thames & Hudson, 2013.
- Canada, Ontario, Ministry of Tourism, Culture and Sport, “Key Ratios for population group 100,001-250,000,” in *Ontario Public Library Statistics 2017*.
- Crawford, Alice. *The Meaning of the Library: A Cultural History*. Princeton: Princeton University Press, 2015.
- Dalrymple, Theodore. “Why second-hand bookshops are just my type.” *The Telegraph*, December 3, 2012.
- Greater Sudbury Public Library, “History of GSPL,” www.sudburylibraries.ca
- Harris, Michael. *History of Libraries of the Western World*. Maryland: Scarecrow Press, 1999.
- Howarth, Dan. “Snøhetta and Dialog’s New Central Library for Calgary features vast wood-lined atrium.” *Dezeen*. November 5 2018.

- Debord, Guy. "Theory of the Dérive." in *Internationale Situationniste* #2. Translated by Ken Knabb. 1958.
- Langdon, David. "Bibliotheca Alexandrina / Snohetta." *Archdaily*. February 3, 2015.
- Latimer, Karen. "Redefining the library: current trends in library design." *Art Libraries Journal* 35. No. 1. (2010). 30.
- Lerner, Fred. *The Story of Libraries: from the invention of writing to the computer age*. New York: The Continuum International Publishing Group, 2009.
- Murray, Stuart A. P. *The Library: An Illustrated History*. Skyhorse, 2009.
- Nell, Victor. *Lost in a Book: The psychology of reading for pleasure*, New Haven: Yale University Press, 1988.
- Ontario Public Library Guidelines Monitoring and Accreditation Council (ed.). "Ontario Public Library Guidelines: For Municipal and County Public Libraries." 7th Edition, 2018. www.ontariopubliclibraryguidelines.ca
- Prince-Ramus, Joshua. "Behind the Design of Seattle's Library." Filmed February 2006 in California. *TEDTalks*. 19:55.
- Ransom, Jessie. "Library Exploration through Serendipitous Discovery." *Ex Libris*. September 22, 2016. www.exlibrisgroup.com/library-exploration-through-serendipitous-discovery/
- Snohetta. "Calgary's new Central Library." *Snohetta.com*. 2018.
- Solnit, Rebecca. *A Field Guide to Getting Lost*. New York: Penguin Press, 2005.
- Vitruvius. *The Ten Books on Architecture*. Translated by Morris Hicky Morgan. New York: Dover Publications, 1960.

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